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FOR A SMOKELESS CITY.

ANNOUNCEMENT of an invention by a former official of a Western city of a smokeless furnace which, it is claimed, will not only eliminate smoke from the city, but also effect an economy of about \$1,350,000 a year by saving \$1 a ton in the consumption of coal, is one of the indications of the advance toward conservation of natural resources which, in spite of its vast store, this country cannot apply too practically and too promptly. Many, many years must pass before direct combustion at the place of activity of coal, petroleum, natural gas or other fuel for power, light and heat will be done away with. This country's enormous known supplies of such fuels, to say nothing of those still to be discovered, obviate any cause for apprehension about a shortage in the immediate future. The essence of the true conservation idea, however, is that the mere fact of an abundance by no means justifies heedlessness or wastefulness in handling any material, but that wisdom demands the use of material under any circumstances so as to assure full results. Mechanical stokers and other devices are saving waste in furnace practice, and in the burning of coal at the pit's mouth for the generation of electric energy to be widely distributed has been marked out a plan, which must constantly expand, of saving energy in the distribution of fuel by consuming the fuel at its point of origin in generating electrical power. Regulation of the use of mineral fuels in this way will be induced by hydro-electric development up to the full potentiality of the streams of the country. "White coal" is, after all, the assurance of the "smokeless city." That idea has recently been worked out by E. M. Hall, an expert, who, writing in the *Constitution*, prophesies that within the next decade Atlanta is to become a smokeless city in that, situated 1070 feet above sea level and 300 feet above the flood plane of the nearest river, it is a great water-power center, and that within a radius of 100 miles are streams developing 1,153,000 net 10-hour horse-power based on average low water, which would warrant a wheel installation of more than 1,600,000 horse-power. Bearing upon this estimate are the figures of State Geologist S. W. McCallie following recent visits by him to individual plants in Georgia using hydro-electric energy. He shows that, excluding smaller developments, 181,744 horse-power have been developed at points susceptible to ultimate development of 278,769 horse-power, or, in other words, that these water-power plants as now developed can be increased by the installation of additional units more than one and a half times, and as this additional installation is likely to be made as the demand for power increases, the full development will be available within the next 10 years.

Mr. McCallie, comparing these figures with those of Mr. Hall, estimates that the present developments of Georgia are only about 14 per cent. of the State's total water-power.

The situation in Georgia, where, as in the Carolinas, West Virginia, Virginia, Tennessee and Alabama, some of the greatest developments in the South of hydro-electric power has been made, is typical of the general situation in that section. Of an estimated minimum horse-power in all Southern streams having each more than 500 horse-power, 4,918,910, with an estimated maximum of 9,210,350, only about 1,000,000 horse-power has been hydro-electrically developed, and that constitutes only about one-fifth of the primary horse-power developed annually for Southern industry. But it is estimated that, with full provision for the storage of surplus water in the streams at flood times and the complete utilization of every opportunity, not less than 20,000,000 horse-power would become available. Such a resource would enable many Southern cities to become smokeless, no matter how their industrial activities and importance should increase.

A COUPLE OF BONDED COTTON WAREHOUSE SUGGESTIONS.

D. A. TOMPKINS of Charlotte, N. C., has long been an advocate of the warehouse system for cotton, and about 10 years ago copyrighted a plan in detail and on the practical lines that have been followed closely in all subsequent discussions. Writing to the MANUFACTURERS RECORD in reference to the present project, he says:

I think the proper warehouse system will ultimately comprise a system of cotton warehouses in the cotton-growing States, and then a system of cotton-goods warehouses in the cotton markets of the world. This would put it in a position to keep our mills running regularly, with our goods stored in the markets of the world ready for distribution and under a financial system that would admit of local credits. This would require us to have ships to transport the goods to the big foreign markets where the warehouses were. England has this system more or less in operation in the Malay States and other places. Her manufacturers in Manchester keep the big warehouses supplied with goods. English merchants take Malay products, such as tin, and bring it to England for smelting. England's ships and her big warehouses are big factors, and, of course, her money system for carrying the goods until sold and the work of her merchants are also big factors. This is the direction, I think, in which the warehouse plan moves and will move.

Mr. Tompkins suggests here a broad and comprehensive plan appealing strongly to the manufacturing and commercial imagination. Within less than two weeks the American Cotton Manufacturers' Association, composed principally of Southern cotton manufacturers, but embracing representatives of all textile sections of the country, is to consider at its annual convention in New York all phases of the so-called Duke bonded cotton warehouse plan. It is hardly possible that the feature sketched by Mr. Tompkins can be overlooked. Another point is made in a letter to the MANUFACTURERS RECORD by G. Gumby Jordan, president of the Eagle & Phenix Mills of Columbus, who says:

It is a fact that Columbus occupies rather a unique position in this regard. I think every cotton warehouse in town is automatically sprinkled. They secure very reasonable rates of insurance, and the firms are all strong and able to advance on the cotton on store. The consequence is it makes money for the factor and the warehouseman, is a great accommodation to the farmer and is a reliable source of supply for the manufacturer. All of which goes to help make Columbus the strong point it is and draws new mills here automatically.

Establishment of cotton warehouses in foreign markets will be an extension of the policy that other industries of the United States have essayed,

and will be facilitated by the new currency law. Creation in the cotton States of this country of a great system of bonded warehouses, taking in wherever possible existing ones, will increase the benefits to growers, factors, manufacturers and financiers that have already been forecast in the experience of the warehouses at a number of points.

SUMMONS OF THE SOUTH.

II—TIMBER RESOURCES.

NEARLY fifteen years ago the expert opinion was expressed to the effect that in the South lay the key to the situation of the future lumber market of this country, and that, according to the manner in which what remained of its enormous timber wealth should be managed and exploited, the section might or might not control the market forever. At that time the South was cutting about 14,000,000,000 feet, or 40 per cent. of the total lumber cut of the United States. Within the preceding decade it had more than doubled its cut as the tendency increased to use yellow pine in place of white pine and to bring to market a greater and greater quantity of Southern hardwoods. Since then the tendency has become more pronounced in both directions, and the exploitation of Southern timber resources is quite clearly revealed in the following table, comparing by States the number of feet of lumber cut in 1880 and 1912:

THE SOUTH'S LUMBER CUT, FEET.

	1880.	1912.
Alabama	251,851,000	1,378,151,000
Arkansas	172,503,000	1,821,811,000
Florida	247,627,000	1,067,525,000
Georgia	451,788,000	941,291,000
Kentucky	305,684,000	641,296,000
Louisiana	133,472,000	3,876,211,000
Maryland	123,336,000	174,320,000
Mississippi	168,747,000	2,381,898,000
Missouri	399,744,000	422,470,000
North Carolina	241,822,000	2,193,308,000
Oklahoma	168,806,000
South Carolina	185,772,000	816,930,000
Tennessee	302,673,000	932,572,000
Texas	328,968,000	1,902,201,000
Virginia	315,939,000	1,569,997,000
West Virginia	180,112,000	1,318,732,000
Total	3,810,038,000	21,607,519,000
United States	18,125,432,000	39,158,414,000

Fifteen years ago the South was cutting annually 7,000,000,000 feet of yellow pine, 2,000,000,000 feet of oak, 500,000,000 feet of cypress, 500,000,000 feet of poplar, 150,000,000 feet of hickory, 35,000,000 feet of red gum, 10,000,000 feet of cedar and 505,000,000 feet of all other timbers. Today it is cutting nearly 15,000,000,000 feet of yellow pine, nearly 2,500,000,000 feet of oak, nearly 1,000,000,000 feet of cypress, more than 500,000,000 feet of poplar, more than 200,000,000 feet of hickory, nearly 700,000,000 feet of red gum, nearly 70,000,000 feet of cedar and nearly 2,000,000,000 feet of all other timber. Of more than 50 woods manufactured into lumber the South is now cutting more than 40, including yellow pine, white pine, hemlock, spruce, cypress, larch, cedar, balsam fir, among the softwoods, and oak, maple, red gum, poplar, chestnut, beech, birch, basswood, hickory, elm, ash, cottonwood, tupelo, sycamore, walnut, cherry, buckeye, locust, willow, dogwood, persimmon, cucumber, osage, orange, laurel, magnolia, mulberry, palmetto, silver bell and others, among the hardwoods. In 1912, the latest year for which figures are available, Arkansas led the States of the country in the production of hickory, 56,757,000 feet, and of red gum, 211,920,000 feet; Louisiana, in yellow pine, 2,028,632,000 feet; cypress, 653,727,000 feet, and tupelo, 54,581,000 feet; Mississippi,

in cottonwood, 59,228,000 feet; Missouri, in sycamore, 8,222,000 feet, and West Virginia, in oak, 404,637,000 feet; chestnut, 123,825,000 feet, and poplar, 118,982,000 feet. The total cut of these woods in these five States was something more than 21 per cent. of the total number cut of the South and nearly 12 per cent. of the total cut of the United States.

Between 1880 and 1912 the cut in the South increased from 3,810,038,000 feet to 21,607,519,000 feet, or by 17,797,481,000 feet, equal to 466.8 per cent., while the cut in the rest of the country increased from 14,315,394,000 feet to 18,550,895,000 feet, or by 4,235,501,000 feet, equal to 29.6 per cent. The proportion of the Southern cut by woods of the total cut of the country is shown in the following table:

FEET OF LUMBER CUT BY WOODS—1912.

Softwoods.

	The South.	United States.
Yellow pine.....	14,662,000,000	14,737,000,000
Cypress.....	994,000,000	997,000,000
Hemlock.....	352,000,000	2,427,000,000
Spruce.....	244,000,000	1,239,000,000
White pine.....	139,000,000	3,138,000,000
Cedar.....	69,000,000	329,000,000
All other.....		7,659,000,000
Total.....	16,460,000,000	30,526,000,000

Hardwoods.

Oak.....	2,478,000,000	3,319,000,000
Red Gum.....	667,000,000	694,000,000
Yellow poplar.....	539,000,000	623,000,000
Chestnut.....	328,000,000	554,000,000
Hickory.....	215,000,000	279,000,000
Cottonwood.....	189,000,000	228,000,000
Maple.....	139,000,000	1,021,000,000
Tupelo.....	119,000,000	123,000,000
Ash.....	116,000,000	235,000,000
Beech.....	97,000,000	435,000,000
Basswood.....	70,000,000	297,000,000
Elm.....	57,000,000	262,000,000
Sycamore.....	33,000,000	49,000,000
Birch.....	27,000,000	388,000,000
Walnut.....	19,000,000	43,000,000
All other.....	55,000,000	82,000,000
Total.....	5,148,000,000	8,632,000,000
Aggregate.....	21,608,000,000	39,158,000,000

The South is now cutting 16,460,000,000 feet, or 53.9 per cent. of the total cut of softwoods, and 5,148,000,000 feet, or 59.7 per cent. of the total cut of hardwoods. In 1912 it cut 994,000,000 feet, or 99.6 per cent. of the total cut of cypress; 14,662,000,000 feet, or 99.5 per cent. of yellow pine; 119,000,000 feet, or 96.7 per cent. of the tupelo; 667,000,000 feet, or 96.1 per cent. of the red gum; 539,000,000 feet, or 86.6 per cent. of the poplar; 189,000,000 feet, or 83.2 per cent. of the cottonwood; 215,000,000 feet, or 76.6 per cent. of the hickory, and 2,478,000,000 feet, or 74.6 per cent. of the total cut of oak, the aggregate of these cuts in the South, 19,863,000,000 feet, being just a little more than half of the total cut of all the lumber of the country.

Up to 1880 comparatively little demand from outside the South had been made upon the original forest area of 500,000,000 acres in the South, and the larger part of the inroads had been made by way of clearing lands for agriculture and of obtaining lumber for home consumption. In 1880 the South cut about 21 per cent. of the total cut of the country. Within the next 10 years it made some slight gains relatively, but by 1900 it was cutting more than 41 per cent. of the total, and in 1912 it cut more than 55 per cent. of the total, its output of 21,607,519,000 feet being 3,482,087,000 feet greater than the total cut of the whole country in 1880.

These facts indicate both the variety of timber in the South and the increasing demands upon its resources of the kind. They show the large basis for wide diversity of industries based upon lumber, and at the same time emphasize the necessity for scientific handling of that basis to the end that it may remain a permanent source of wealth and the means of employment of hundreds of thousands of persons in productive enterprises.

Probably less than 30 per cent. of the lumber made in any Southern State is given any further industrial handling in that State, and Southern lumber is carried to the Lake States, to the Pacific Coast, to the New England States, and even into Canada, to be used either in construction work or in the manufacture of furniture, wagons and other articles. One Southern State, quite typical, has 182 species of trees, of which only 17 are now cut for

lumber. It cuts more than 1,000,000,000 feet of lumber a year, and its woodworking industries use 521,000,000 feet, of which 476,000,000 are cut in the State. Of the total lumber used 407,000,000 feet go into planing-mill products, 55,600,000 feet into packing boxes and crates, 36,000,000 feet into sashes, doors, blinds and general mill work, 9,600,000 feet into bobacco boxes, 8,500,000 feet into car construction, 1,600,000 feet into ship and boat building, 167,000 feet into vehicle and vehicle parts, and 2,000,000 feet into miscellaneous products. In another State, cutting about 780,000,000 feet a year and using 423,000,000 feet, of which 21,000,000 feet are brought from other quarters, 368,000,000 feet go into planing-mill products, 26,000,000 feet into sashes, doors, blinds and general mill work, 7,800,000 feet into baskets and fruit and vegetable packages, 6,000,000 feet into boxes and crates, 3,000,000 feet into caskets and coffins, 1,600,000 feet into car construction, 1,500,000 feet into furniture, 785,000 feet into vehicle and vehicle parts, 756,000 feet into ship and boat building, 682,000 feet into handles, 272,000 feet into fixtures of various kinds, 46,000 feet into agricultural implements, 41,000 feet into patterns and flasks for foundries, and 1,000,000 feet into miscellaneous articles.

It must be borne in mind that the opportunities for investment in woodworking industries thus exemplified by no means exhaust the demands upon Southern forests. They must furnish, in addition to planks, boards, shingles and laths, poles for telegraph, telephone and other electric operations, materials for fence posts and rails, for cross-ties, for cooperage stock, for mine timber, for paper manufacture and for tanning. Enforced economies have brought about the annual use of more than 250,000,000 feet of Southern woods for cutting into veneers to be used in the manufacture of furniture and cabinet work, packing boxes, berry cups, fruit baskets, drawer bottoms, dishes and plates, and the utilization even of the waste of pine-lumbering operations in the manufacture of paper and the derivation of alcohol, acetic acid and other by-products. Moreover, a portion of the 90,000,000 acres, stretching along the coast from the Chesapeake to the Rio Grande, with a width of about 125 miles, embracing most of the pine area of the South, is the main dependence for this country's supply of naval stores, a most important item in its industrial life and in its export trade.

So from a dozen or more main directions come the demands of industry upon the Southern forests, and it is well that already more than 6,000,000 acres of timber land has been designated as purchase areas in Virginia, West Virginia, North Carolina, Tennessee, South Carolina, Georgia, Maryland and other Southern States to constitute a part of the Appalachian National Forest, which will be a perpetual timber reserve, affecting advantageously the agriculture, the manufacturing and the commercial activities of the South, and in the handling of which by Government experts will be set the pace for the proper treatment of other forest stretches, enabling the South to maintain its present position as a contributor to the rough lumber output of the country, as well as a permanent source of material for woodworking industries within its own borders.

A GHOST THAT WILL NOT DOWN.

CONSIDERATION of the legislative, executive and judicial appropriation bill in the National House of Representatives last week made occasion for an echoing of a couple of opinions, one successful and the other unsuccessful, advanced when the income tax law was under discussion at the last session of Congress. Congressman H. Robert Fowler of Illinois made the point of order against the paragraph dealing with salaries in the office of the Commissioner of Internal Revenue, charged with the administration of the income tax law, on the ground that an increase in the salary of one official was not authorized by law and that there was no such authority at all for the creation of the other salary. In criticism of the point of order, Congressman Joseph T. Johnson of South Carolina said:

After many years Congress has succeeded in putting upon the statute books an income tax law, in order to tax the rich and take the burden of Government off the poor, especially the laboring men of this country, placing it upon the shoulders of those who are better able to bear

the burden and who have shirked those burdens for so many years. We have placed upon this particular bureau the responsibility and duty of collecting from these men of great wealth these revenues to run the Government, and the gentleman from Illinois, who is supposed to be friendly to this great administration and a friend of labor, comes into this committee and absolutely paralyzes the enforcement of this great law by asking that this important paragraph be stricken from the bill.

Mr. Fowler answered this ad hominem appeal very properly by making, in connection with another similar point of order, the plain statement that if the committee desired to make ample provision for the administration of the Government, it was its duty to bring in a clean bill in harmony with the plain provisions of the statute. He might have suggested also that there is nothing in the Constitution of the United States or in any law dominated by the letter and the spirit of that document which authorizes taking the burden of Government off of any class, even though it may consist of "the laboring men of this country," and placing it upon another class. Such a doctrine is rankly undemocratic and unjust, and, in essence, is a greater menace to the laboring men of this country than, perhaps, to any other class. Scant regard, however, was had for fundamental principles of law in the framing of the income tax law, while there was the boldest sort of demagoguery in promoting its passage. There is developing at Washington too much ignorance or carelessness about fundamental principles in framing national laws. Congressman Fowler is to be commended for assailing this tendency by way of a paragraph in an appropriation bill bearing upon such a revolutionary proposition as the income tax law, the most notorious illustration in half a century of a combination of incompetency and appeal to class in national legislation. It is hardly likely that last week's episode will result in sufficient provision not being made for the administration of the income tax law as it is at present measured. But it is believed that by June 1, when taxpayers under the law must have their income tax bills from the Commissioner of Internal Revenue, it will be discovered that the measure will be entirely inadequate, and that not only will the expenses of attempting to administer the law be far beyond the estimate which allowed \$800,000 for the fiscal year ending next June 30 to meet the expenses of carrying out the law, but also that the administration of the law will not yield the revenue expected. Again, therefore, the Congress is urged to spend about two weeks in removing from the law the obvious defects of law, of language, and thus avoid the necessity of having to do the work all over again, with consequent fiscal embarrassment for the administration.

COAL: THE SOUTH VS. WALES.

HE was much more alarmed at the threatened competition of American coal than at that of oil. They had coal in America, there was no doubt, which was very little short in quality to that of South Wales. In West Virginia and in the Pocahontas and the New River coal fields there were large areas of coal which were very little inferior to the best Admiralty coal, and when the Panama Canal was open he confessed that he thought most of the coal used out there would be American and not Welsh. The cost of production in South Wales had doubled in 25 years, while such cost in the United States was less, and coal of good quality could be put on rail in West Virginia at one-third the cost in South Wales.

Such is the condensation of the remarks as to the effect on South Wales coal exports of the opening of the Panama Canal made by D. A. Thomas, founder and directing head of the Consolidated Cambrian, a great coal combine centering in South Wales, at the annual meeting of the corporation a few weeks ago. The remarks are embodied in a report of United States Consul Lorin A. Lathrop at Cardiff, which appears in part on another page of this issue. They are largely an iteration of opinions expressed by Mr. Thomas after a trip to this country about 18 months ago, a visit which has since attracted more than usual attention to every report that Mr. Thomas was contemplating investment in Southern coal properties. Mr. Thomas was impressed by the very great prospects before the American coal trade, and expressed the hope to take some part in it in the near future. While not feeling for the time being any anxiety about American competition in the world's mutual markets, he said that there were great possibilities for the coal trade on the west coast of South America, not only because that region was much nearer to the United

States coal fields than to those of Wales, but in that it furnished good return freights in nitrates, while there was already keen competition between English and Australian coals. He noted especially the excellent conditions for dispatch in coal production and coal handling, especially the situation in the Hampton Roads basin, and added:

The Americans have a very great advantage over us in their natural conditions, but, on the other hand, we have the pull in transport. Whereas some of the coal fields we visited are from 300 to 400 miles away from the port, the railway rate charged is about 6c. With us the average distance is about 20 miles, and the average railway rate only about a shilling. Then, again, the conditions of our foreign trade at the present time give us—and will so far as one can see for some time to come—cheaper freights to our foreign markets than the Americans can hope to get.

About six months ago there was reliable information given that representatives of Mr. Thomas in this country had secured options on about 30 coal mines producing annually an aggregate of 2,500,000 tons and on 150,000 acres of undeveloped coal land in the New River and Pocahontas fields, and that the deal, if consummated, would represent about \$20,000,000. These earlier reports lend interest to the latest utterances of Mr. Thomas, whose combine is one of the largest and most far-reaching ones in the world, as it embraces the control of practically all of the operations involved in the distribution of its coal from the pit's mouth to the consumer, manages its own depots and agencies in different parts of the world, and controls steamships having an aggregate capacity of about 70,000 tons. Mr. Thomas' practical interest in the possibilities for Southern coal in the opening of the Panama Canal ought not to be greater, as far as preparing to take the best advantage of the opening, than that taken by Southern coal operators and shippers.

Handling Cotton at Houston.

[Special Correspondence Manufacturers Record.]

Houston, Tex., April 9.

Inman, Nelms & Co., under the name of the Nelms-Kehoe Dock Co., have begun the construction of new compress, classing shed and warehouses at Port Clinton, some 8 miles from Houston on the Houston ship channel. The new buildings were made immediately necessary by the recent destruction by fire of the two large cotton sheds at that point belonging to the Southern Pacific Railway Co., at which fire 16,000 bales of cotton were burned, nearly all of which belonged to Inman, Nelms & Co. It had been arranged to make developments of some sort here previous to the fire, and the Southern Pacific contemplates putting in extensive permanent improvements at this port, which will probably include slips for the accommodation of much larger and heavier ships than have heretofore tied up at that landing. The improvements now being put in by the Nelms-Kehoe Dock Co. include a new Webb compress, a classing shed 125x700 feet in dimensions, with gravel and shell floor and corrugated-iron sides and a saw-toothed roof. It will have a capacity of 5000 bales of cotton; also two warehouses 200x250 feet, each with 5000 bales capacity, giving 15,000 bales capacity to the development. The warehouses will have brick walls, with a tar and shell roof. It is expected that the entire improvement will be ready by August 1. The work of excavating and the construction of houses for workmen is under way. The cost of the plant will be about \$125,000.

ALBERT PHENIS.

Memphis Levee and Pumping System.

The city of Memphis has awarded contracts, aggregating \$532,000, in connection with its plans for levee and pumping system, for which \$1,500,000 bonds have been authorized. These plans provide protection for section of the northern portion of the city from Bayou Gayoso overflow. Contracts as follows: Thos. Hornan & Hickey Bros., St. Louis and Helena, Ark., at \$282,031.28, and Southern Asphalt Co., Birmingham, at \$229,000.29, to construct 18-foot concrete drainage tunnels, former to build under Gayoso avenue and latter under Huling avenue; F. D. Harvey & Sons, Memphis, at \$21,125, for stripping and grading levee site from Winchester to Hickory avenue. Bids for sheet piling and concrete wall work were rejected, and C. C. Pashby, city clerk, was instructed to again advertise for bids on this construction.

East Coast of Florida As Seen In Motor Trips

[Editorial Correspondence Manufacturers Record.]

Miami, Fla., April 7.

On March 2, 1913, the MANUFACTURERS RECORD received from Carl G. Fisher the following telegram:

"Miami, Fla., March 1.

"Manufacturers Record, Baltimore, Md.:

"We have one million yards of first-class sand filling to do within the next four months. I wish to have you give me by wire the names of large dredging companies in this vicinity who are able to figure on this job. The

000 cubic yards will be required to complete the work.

A thousand acres of level land, beautifully located for residences and business purposes and for all city building activities, now occupy the site where 12 months ago the jungle seemed almost impenetrable and where the low lying overflowed land offered few attractions to investors or developers.

Mr. Fisher, whose activities include the development of interests connected with the automobile industry, and with the growth of Indianapolis, and who was the promoter of the proposed Lincoln Highway, saw in the Miami situation great potentialities. With the energy which has marked his work in the West he turned his attention 12 months ago to this broad land-making scheme.

Some strong local people owning property adjacent to that secured by him have been engaged in a similar campaign.

Mr. Fisher has reclaimed or really created about 600 acres of land. The Ocean Beach Realty Co. has, in the same way, made nearly 400 acres adjoining. Fisher and local people have been working together with the utmost harmony. He has carried his development far enough to have set out palms and shade trees and to have sowed grass seed over a considerable portion of his large tract. All of this has been accomplished in 12 months. Mr. Fisher has already planned for an elaborate winter home for himself on the ocean front of his property, and a number of other expensive houses will be constructed in the near future on the land which he has reclaimed.

The Ocean Beach Realty Co., whose plans have been previously described in the MANUFACTURERS RECORD, has already found such a demand for lots, even before the ground is ready for a single house, that it has sold about \$300,000 worth of property, on which a large number of dwellings, most of them of the more expensive kind, will be erected.



A ROYAL ROAD OF ROYAL PALMS LEADING FROM A PRIVATE RESIDENCE TO THE SHORES OF BISCAYNE BAY, MIAMI.

plan calls for reclaiming about two miles of water front with twelve to fifteen feet of clear sand available.

"CARL G. FISHER, President.

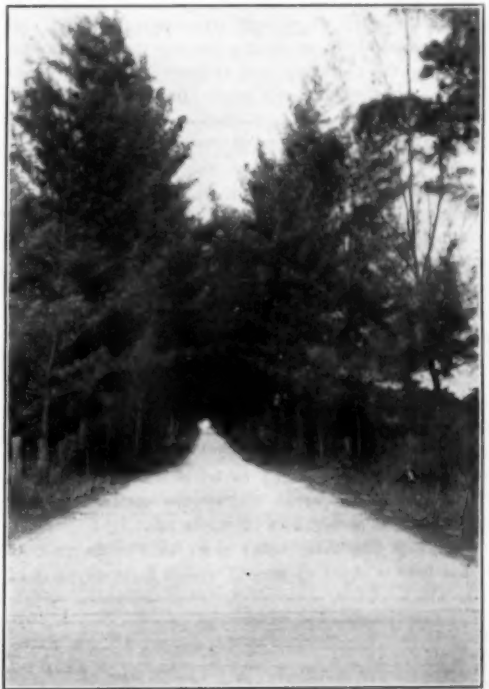
"Prestolite Co., Indianapolis, Ind."

The information desired was wired to Mr. Fisher, and among the names of the contracting concerns able to handle such a job was that of the Furst-Clark Construction Co. of Baltimore.

A visit to Miami gave the opportunity to see in person some developments which are being made by Mr. Fisher, by the Ocean Beach Realty Co. and by others, separate entirely as to financial backing, but all united closely by the physical connection of the work of these concerns. The magnitude of what they are doing is illustrative of the broad daring work that is seen in many parts of Florida, giving a sure indication of what the future growth of this State will be.

Just across Biscayne Bay from Miami there was a year ago a wide stretch of jungle land reaching from the eastern shore of Biscayne Bay to the Atlantic, much of it under water. Few men would have thought that it would prove profitable at present to turn this jungle into a beautiful stretch of land for city building, but Carl G. Fisher of Indianapolis and local people saw what could be achieved by big expenditures. The old story of Michael Angelo, who, looking upon the rough block of uncut marble, saw in it an angel's face which needed but his work to be brought to perfection, typifies what these men of vision saw in that jungle land.

Last summer they turned into the jungle hundreds of men who were often standing deep in water, to cut down trees and clear out the undergrowth. The trees and the undergrowth were permitted to lie where they fell under the blows of the axes. Then on the Biscayne Bay side some retaining walls were built and three powerful dredges were put to work by the Furst-Clark Construction Co., who received the contract, to pump in the clean white sand from the bottom of Biscayne Bay. Up to the present time about 3,500,000 cubic yards have been filled in, and about 1,000,000 to 1,200,-



A BEAUTIFUL ROAD LINED WITH AUSTRALIAN PINES, WHICH ARE RAPID GROWERS AND ARE SAID TO ATTAIN THE GROWTH HERE REPRESENTED IN FIVE OR SIX YEARS. DADE COUNTY, FLORIDA, IS PUTTING THESE PINES OUT ALONG NEARLY EVERY GOOD COUNTY ROAD FOR SHADE AND AS PROTECTION TO THE SURFACE OF THE ROAD AGAINST THE SUN.

Up to the present time the purchase and reclamation of these properties has represented an outlay of about \$800,000.

One little story told in connection with this development typifies the way things have been going in the Miami section. A portion of the land, having an ocean front, which the Ocean Beach Realty Co. needed in rounding up its operations, was bought from an Eastern man at \$300 per acre. The records show that in 1885



LOOKING ACROSS THE GROUNDS OF THE ROYAL PALM HOTEL AND OVER BISCAYNE BAY, ABOUT THREE MILES WIDE AT THIS POINT.

A HARD ROCK ROAD IN SOUTH FLORIDA MADE FROM LIMESTONE, WHICH, WHEN ROLLED, SOLIDIFIES LIKE CEMENT, THOUGH NOT QUITE AS HARD.

he bought the tract of 100 acres at 62½ cents an acre. Just what percentage of profit this is it would be useless to figure. But this is somewhat typical of what has been going on in the Miami section, and, for that matter, in many of the most progressive towns and cities of the State.

Much of the site of this bustling, busy town, with its estimated resident population of 18,000, and much more than this during the winter tourist season, was itself a jungle 18 years ago. Some splendid streets and many fine houses are now found where but a few years ago heavy jungle growth and great forest trees covered the land.

No one can study the Miami section without being impressed with its very great future. Special correspondents of the MANUFACTURERS RECORD have, from time to time, told of its growth. I shall, therefore, not reiterate the details. Suffice it to say that Miami more than measures up to what has been written of it, and seems to fully measure up to the enthusiasm of its enthusiastic citizens. But some general jottings of roads and progress as seen in a motor trip from Jacksonville to Miami may prove of interest.

Splendidly located, with ideal climatic conditions to draw many thousands of winter tourists, with ocean breezes that keep its summer atmosphere pleasant, and with a wonderfully productive country to the north and to the south, a country that is being very rapidly settled up by thousands of people from other sections, Miami is signally well favored by nature. Looking out across the rippling waters of Biscayne Bay, 3½ miles to the shore line of the land which separates the bay and the ocean, the view is one of rare beauty. It was this superb water view, coupled with the climate, that tempted Secretary of State Bryan to select on the water front at Miami a site for a home as ideal in location and in beauty as that which the "Father of His Country" enjoyed at Mt. Vernon. The high bluff location and the view somewhat remind one of Mt. Vernon, except that the water view here is far wider and more beautiful than that of the Potomac. Along the bay front stretches a great bluff with a rocky shore line. On this bluff Mr. Bryan has built his home, as have many other men widely known in public and business life. Such a spot ought to be charming enough to tempt anyone to forego the lecture platform or the activities and perplexities of public life.

Miami is like many other cities in Florida, in that it has been selected by men of wealth from all parts of

the United States as the site for winter homes. Even now one of the Deerings, of International Harvester fame, is letting contracts for a residence which when completed will represent an outlay of probably \$500,000. About 100 acres of ground will be used by Mr. Deering as his home site, and the development of this will represent an additional heavy outlay. Another member of the same family is figuring on building a large winter residence nearby.

Probably nine hundred and ninety-nine out of every thousand men who have not visited or personally studied South Florida have an absolutely erroneous idea as to its geological formation as well as to its climate. Not more than one out of a thousand probably knows that all of the Miami section, and, indeed, a very large part of South Florida as far down as Key West, is built on solid rock, and most people who have not wintered in Florida think it has excessive heat and an enervating climate. In reality, the winter climate is not summer heat at all, but more like the Indian summer weather of a fine October or early November in the East. Its climate, instead of being enervating, is strong and invigorating. Instead of finding a low, flat country, one may ride along the beautiful Indian River, two or three miles wide, on a superb motor road running along a high bluff for 30 or 40 or perhaps 50 miles. And then, after a considerable stretch of level land, the Miami section is reached, and here again the rocky formation is found along the Biscayne Bay and on down to the end of the State.

In this section limestone is so abundant that many fields are fenced, as in New England, with the loose rocks that are picked up on the surface. In some cases dynamite is used for blasting holes for orange and grapefruit trees, because the rocky formation is so hard that holes cannot be made in any other way. In this limestone formation, where the holes are blasted by dynamite, the roots of the trees penetrate the rock and gain sustenance, and some say they thrive better even than on ordinary soil.

Some years ago, when the use of dynamite for such purposes had scarcely been heard of, Mr. Henry M. Flagler told me that he had set out a 70-acre grove of grapefruit, and that a very large part of the land was so rocky that he had been compelled to use dynamite to blast holes for the trees. He expressed his own surprise at the vigor and vitality of the trees set out by the use of dynamite in this rocky formation. Some of the trees, said he, in this rocky land or in this veritable

rock, for in places there seemed to be no soil, are thriving better and standing the hot weather better than trees planted where there was more soil.

A few days ago I visited the Flagler grove, in order to see what had been accomplished on that rocky land. I found one of the finest fruit groves which I have ever seen in Florida. It is nine years old, and the production this year, according to the superintendent, will run to between 25,000 and 30,000 boxes from the 70 acres, or about a carload per acre.

Directly in front of Bryan's home on the river bluff, where the water has washed away a portion of the rock, is an excellent illustration of how this semi-porous limestone rock is penetrated by roots of trees. The picture published in connection with this tells the story better than words could do.

From Jacksonville to Miami, a distance of about 370 miles, there are some very bad pieces of road. There are one or two swampy places, there are several five or six-mile stretches of intolerably bad sand, and there is a half-mile ferry which is not satisfactory, although it is safe, but it cannot be used during very windy weather on account of the waves. The motorist, therefore, who reaches that point on a windy day is held up, because there is no other way of crossing the water than in this flatboat ferry.

These bad places in the long line from Jacksonville to Miami seriously militate against a motor trip between these two points. Nevertheless, hundreds of motor cars are passing up and down the East Coast section during the winter months. Thousands would pass up and down this road if these bad stretches were eliminated, and much progress is being made in that direction. So short are the bad stretches compared with the long reaches of good roads that it would seem that united effort during the spring and summer ought to wipe out these bad roads before another winter.

A large part of the 370-mile stretch is composed of exceptionally fine road. There are many miles along the Indian River that are as good as any motorist needs, which for beauty can scarcely be matched in New England. Mile after mile one spins along on a smooth, well-made road, looking across the Indian River on one side and out over a continuous stretch of orange groves and pineapple fields on the other, bordered here and there by flowers that fairly run riot with their glorious coloring. If the entire road from Jacksonville to Miami was as good as 200 miles of it, it is fairly safe to say that for a considerable portion of the winter one would



OYSTER AND CLAM SHELL BANK ON THE HALIFAX RIVER NEAR DAYTONA.

RIDGEWOOD ROAD, DAYTONA, LINED WITH BEAUTIFUL TREES FOR MILES.



MILE AFTER MILE OF THIS SPLENDID HIGHWAY STRETCHES OUT BEFORE YOU ON A MOTOR TRIP TO MIAMI, LINED WITH VEGETATION TYPICAL OF FLORIDA'S FAUNA.



A CLOSE VIEW OF THE ROCKY FORMATION IN FRONT YARD OF WILLIAM J. BRYAN'S MIAMI HOME, SHOWING HOW ROOTS OF TREES PENETRATE THE SEMI-POROUS LIMESTONE.

scarcely be out of sight of a motor party at any point on the trip, and in a year or two, at the outside, there will probably be such a continuous road. Duvall county, in which Jacksonville is located, has 15 miles of brick highway on this line completed. This will doubtless be extended in the near future to the county line, and the adjoining county, St. Johns, has just contracted for 64 miles of brick road, which will give a continuous brick highway through St. Augustine. The next county is making fine shell roads, and the lower counties are at work on the short bad stretches. The entire road ought to be, if work is properly pushed, in much better shape by next winter.

In the Daytona section there are extensive beds of oyster and clam shells, which stretch along the coast for some miles. In some places the shell beds or mounds are 20 to 30 feet high. This great supply of shells which has been piled up through the building processes of Mother Nature during the centuries is available for road-making. As these shells are by the river's edge, they are easily loaded into barges or scows and hauled up and down the coast for road-making purposes. The East Coast Railroad also does a considerable business in moving these shells to points needed. These shell banks, miles in extent, form one of the most interesting natural curiosities of Florida.

Farther South is found the great limestone region, which carries billions of tons of lime rock. This rock is used in making roads which, when kept in good order, are exceptionally fine. It is like a natural cement rock, which, when put on the road and well rolled, solidifies and has the appearance of a cement or concrete road. It is in limitless supply, and some of the very best road seen on the trip cost only about \$2500 a mile. Unfortunately, however, the rock seems not to make a road hard enough to stand long and heavy wear without getting into holes or ruts. Sufficient tests have not yet been made to see whether this can be overcome or not. Thorough maintenance care would probably be found very helpful. When first made, however, this limestone road looks like solid cement and is exceptionally good for travel. So vast is the quantity of material available, so easily mined, so cheaply put on cars or scows, that the most thorough investigation should be made to test out every good quality of it and find out the best mixture or the best way to use Nature's blessing in this abundant supply of such a road-making material. It is

claimed that experts have pronounced this rock good for Portland cement making, but that fuel is too expensive to justify building a plant. Every phase of this industry should be investigated, for the supply is beyond exhaustion and Florida is a great user of Portland cement.

All along the line there are attractive cities and towns, such as St. Augustine, with its quaint and never-ending charms, which will always appeal to the tourist; Daytona, the Beautiful; Cocoa, Rockledge, Palm Beach, of which it has been said that "it is the most fashionable place in the world," and then on to Miami, where a great city is in the making.

Along this road one sees thousands of acres in oranges and grapefruit groves, and many thousands of acres in pineapples as beautiful as a waving wheat field in the Valley of Virginia.

The trip is one of enchantment for a very large portion of the distance. It only needs the elimination of a few bad points, and this can be done, to make the road down the East Coast of Florida one of the most noted motor tourist trips in the country. Even under present disadvantages, cars from every State in the North and West, from Canada, and even from California, are constantly seen moving up and down the coast.

Hundreds of leading business men of the country known to fame and fortune have their winter homes in this section or else spend the winter in rented houses or in some of the many palatial hotels. Still more thousands of men of moderate means and of people of very limited means find this section a haven of rest from the storms and blizzards of other regions during the winter months.

Southward from Palm Beach is found the great tomato, pepper and eggplant center of the East Coast. From this region hundreds of carloads of these early vegetables are being shipped every week during the winter. It is said that on one day a few weeks ago 90 carloads of tomatoes alone were shipped from one county.

The towns and cities along the whole route are growing. Everybody seems enthusiastic; houses are going up in every direction, and everywhere one hears of new settlers coming in from the North and the West. Between Palm Beach and Miami, a distance of more than 60 miles, there is remarkable activity in starting towns. You are hardly out of one before you enter

another. One danger needs to be warned against, and that is, the laying out of too many towns and the booming of town lots. Too much land which out to be put into crops is staked out for town lots.

This development of the East Coast is indicative of the development which is taking place throughout Florida. The central part of the State is growing with equal rapidity. The West Coast is doing great things, and many towns and cities are pushing ahead astonishingly fast. Road building and municipal improvements are the order of the day everywhere. Florida as a State is making splendid progress, and the activity of its people in their road-building campaign, in making good streets and in keeping their cities clean and attractive, with well painted houses, furnishes an example worthy of emulation all over the country.

R. H. E.

Iron and Steel at Roanoke.

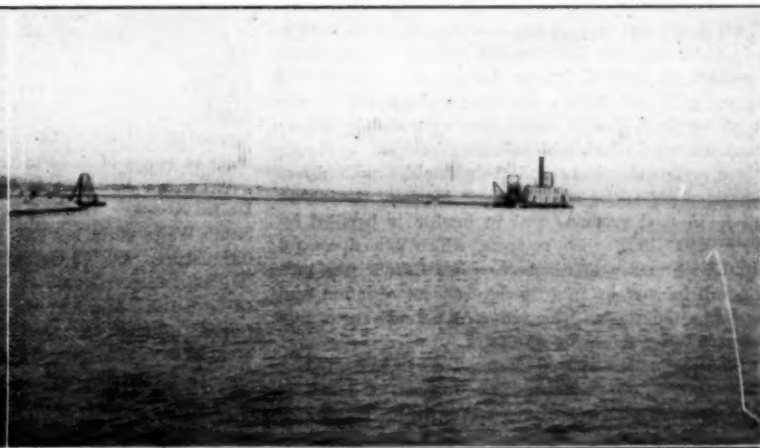
Secretary John Wood of the Chamber of Commerce of Roanoke, Va., writes to the MANUFACTURERS RECORD:

"Roanoke has about 10 establishments for the manufacture of iron and steel, among them what is said to be one of the largest foundries in America; two making bridge and structural materials, etc.; one, the largest of its kind in the South, from which are also being delivered steel bodies for coal cars. There are in Roanoke two metal culvert plants, other machine shops and foundries and a corporation making pyrites, not to mention the fact that Roanoke manufactures locomotives. Developments are expected also in a plant to produce refined iron. The foregoing is, however, not to be taken as an indication that there is not room for more. Plentiful material, labor, power and proximity to market, together with adequate railway facilities, are in readiness and the word has gone forth."

The first shipload of Texas sulphur shipped through Freeport, Texas, from the Freeport Sulphur Co.'s mines, left Freeport on April 8 on the Seaboard and Gulf Steamship Co.'s steamer Honduras. It was also the first heavy tonnage of outbound cargo that has left the mouth of the Brazos River in nearly 20 years.



SHIPPING OYSTER SHELLS AND CLAM SHELLS BY BARGES, THE SHELLS BEING TAKEN FROM THE BANKS OF THE HALIFAX RIVER.



DREDGE THAT HELPED TO RAISE THE "MAINE" NOW USED BY FURST-CLARK CONSTRUCTION CO. IN PUMPING SAND FROM BISCAYNE BAY TO FILL IN.

COAL AT CARDIFF.*

Possibilities of American Competition in the Panama Canal.

The year 1913 was one of extraordinary prosperity throughout the Cardiff consular district. All important industries established a record in quantities, and nearly all a record in financial results. The output of coal from the South Wales coal field exceeded by far the figures of all past years, as did also the export. Coal prices were steadily maintained at high figures and great profits were made, notwithstanding increased cost of production. It is understood that orders aggregating some millions of tons were refused from sheer inability to supply the coal.

Local interest is keen as to the effect the opening of the Panama Canal will have on South Wales coal exports. A frank expression of opinion was made by Mr. D. A. Thomas at the annual meeting, in February, 1914, of the Consolidated Cambrian (Ltd.), of which company he is chairman. Mr. Thomas is described in the Coal Trade Annual of 1914 as probably the best-known living authority on British coal-trade questions, and particularly on those questions in their relation to coal exports. The report in the Cardiff journals of his comments follows:

"He was much more alarmed at the threatened competition of American coal than at that of oil. They had coal in America, there was no doubt, which was very little short in quality to that of South Wales. In West Virginia and in the Pocahontas and the New River coal fields there were large areas of coal which were very little inferior to the best Admiralty coal, and when the Panama Canal was open he confessed that he thought most of the coal used out there would be American and not Welsh. The cost of production in South Wales had doubled in 25 years, while such cost in the United States was less, and coal of good quality could be put on rail in West Virginia at one-third the cost in South Wales."

The shipping industry, highly important in Cardiff, did not find 1913 so successful a year financially as 1912. Freight rates are almost the first to feel the slackening of a world boom, and as the volume of general trade decreased tonnage was sufficiently in excess of requirements to result in a heavy decline. There have been considerable additions to the fleets owned and controlled in Cardiff. These new, larger and up-to-date freight-carrying vessels have superseded inferior ships sold to great advantage elsewhere at the height of the boom. Thus the Cardiff-owned coal-carrying fleet has been improved and enlarged to an unusual extent by important additions and by eliminations of less efficient vessels.

Ship repairing is of the first importance in Cardiff. The drydocks received for repairs during 1913 over 1000 vessels, with a tonnage exceeding 3,000,000, and the highly skilled and well-paid workmen engaged in this industry were constantly employed.

Lumber and grain importations increased with the prosperity of the district, as did also those of frozen meats from Argentina. The receipts of mining timbers from the north of Europe were heavier than ever before.

No new arrangement was made for loading ships and no new docks are projected, although lack of accommodation is becoming a source of anxiety to charterers and coal owners. There were times during the year when vessels were obliged to wait several days for loading facilities. That some scheme will soon be brought forward for the construction of new docks to meet the expanding trade is certain.

So closely centered on coal and shipping is the capital of Cardiff that very little interest is taken in the encouragement of general import trade. This commercial center of Wales, with a densely populated mining district within a 25-mile radius, has witnessed no important concerted effort, with substantial capital, to supply these well-paid miners and their families with direct imported necessities and luxuries. Much of the import trade in food products and in lumber is handled by large firms in English seaports, which gained control of these branches of commerce when Cardiff was putting all its energies into the development of infant coal and iron industries. There appears no evidence of any effort to alter this state of affairs.

The production of coal during 1913 is estimated at 54,000,000 to 55,000,000 tons, an increase of 4,000,000 to 5,000,000 tons over the preceding year. Welsh coal is the most costly to mine in the world, and the output

per annum for each person employed has remained for some years at 220 to 230 tons. The adoption of mechanical appliances, such as coal cutters and conveyors, proceeds very slowly.

So active and constant was the demand for Welsh coal throughout the whole year that prices were continually maintained at high levels, not only for the best Admiralty coals, but also for all other grades. Of these listed Admiralty coals the annual production is 10,000,000 to 12,000,000 tons. It was supplied in 1913 to practically all the navies of Europe, as well as to those of South America, and never sold during the year below \$4.43 per long ton f. o. b. Cardiff, while the average for the 12 months was \$5. The average for all classes of large coal, including Admiralties, was \$4.21; for small, \$2.55; for black veins f. o. b. Newport, \$4.41.

Shipments of coal by water from South Wales ports exceeded 40,000,000 tons; those from the two ports in Cardiff consular district were as follows:

Coal and products.	From Cardiff. Long tons.	From Newport. Long tons.
Foreign	19,325,178	4,654,781
Coastwise	2,994,265	710,382
Bunker	3,245,294	711,769
Coke	165,302	29,740
Briquets	669,933	130,759
Total	26,340,012	6,237,012

Egypt is an annual importer of more than 3,000,000 tons of coal from the South Wales ports. The bulk of this goes to British depots at Port Said. Shipments from Cardiff and Newport in 1913 to Alexandria amounted to 500,000 tons, nearly all for State and railway purposes and of high quality, large, approximating \$4 f. o. b. Cardiff; average freight, 1913, \$2.39; February, 1914, \$1.82. Algeria and Tunis imported in 1913 1,336,000 tons, of which the bulk went to the first named. Shipments from Cardiff and Newport to Algiers were 613,000 tons, at freight averaging in 1913 \$1.94; February, 1914, \$1.35; rates to Tunis are a fraction higher.

To French West African ports were shipped 450,000 tons, all from South Wales, freight rates to Dakar averaging \$2.37; to Portuguese West Africa, 218,000 tons; to British West Africa, 100,000 tons; freight rates to Sierra Leone averaging \$2.43 per ton in 1913; in February, 1914, the shipping rate was \$2.25.

The Canary Islands are consumers of over 1,000,000 tons of British coal, of which more than half comes from the South Wales field; Madeira takes 100,000 tons, the Azores 20,000 tons. Freight rates to these islands in 1913 averaged \$2.12, and were 50 cents less in February, 1914.

Brazil was a buyer in 1913 from the United Kingdom of 1,900,000 tons of coal, of which 1,600,000 were shipped from South Wales ports. A limited proportion of shipments to South American countries is of high-grade Admiralties, a large proportion for State railways, some for domestic purposes, and some for coaling ships. F. o. b. prices at Cardiff vary from something under \$3 to nearly \$5 per ton, according to quality. Rio de Janeiro receives about half the Brazilian imports; freights from Cardiff and Newport, 1913, \$4.09; charters have been fixed in February, 1914, at \$3.28. Freight rates to Para rule from 25 cents to 30 cents below those to Rio de Janeiro; to Bahia somewhat higher, and to Rio Grande do Sul considerably higher, averaging nearly \$7 in 1913.

Uruguay imported over 700,000 tons from the United Kingdom in 1913, of which over 600,000 were shipped from South Wales ports to Montevideo at freight rates averaging \$4.09; February, 1914, rate, \$3.28.

Argentina imported 3,700,000 tons, of which over 3,000,000 came from South Wales ports. Freight rates to La Plata River were the same as those to Rio de Janeiro. Freight rates to Bahia Blanca, which took 400,000 tons in 1913 from Cardiff and Newport, ranged about 50 cents in excess of those to La Plata River.

Chile was an importer of 600,000 tons from the United Kingdom, of which two-thirds were shipped from South Wales ports, but only a small part from the Cardiff district. All the Cardiff shipments were carried in Chilean transports, and no local freight quotations are to be found. Much that went from ports outside the Cardiff district was carried in sailing vessels which brought back nitrates. Freight rates from the United Kingdom to Chile for coal averaged in 1913, \$4.94 per long ton.

For three years there has been continuous employment in all industries at wages which have been materially advanced. The percentage of unemployment—in some industries, at certain periods, not exceeding 1

per cent.—has not been so low in 12 years. Cost of living has increased in that period about 15 per cent., but the percentage of increase in wages in the coal mines has been greater than that.

The minimum-wage act has now been in practical operation for one and one-half years. This law provided for the fixing of minimum wages for the different classes of employees in and about coal mines in the different coal fields of the United Kingdom. A leading trades-unionist states that in 1912, before the passage of the act, a small percentage of skilled miners in the South Wales field earned less than \$1 per day; that 5 per cent. earned less than \$1.20 per day, 15 per cent. less than \$1.45 per day and 34 per cent. less than \$1.70 per day. After the act was in full working order, he states that every skilled miner received a minimum wage of \$1.78 per day.

The act, of course, applies to such skilled miner only when working in an abnormal place where, owing to geological conditions, he could not extract the normal daily quantity. Such skilled miner, working under favorable conditions, has been able to earn throughout the whole of the year from \$20 to \$30 per week, but miners claim that such earnings are exceptional.

At the annual meeting of the Powell Duffryn Mining Co., the managing director expressed disappointment that the output from the company's properties had only been 3,800,000 tons, whereas they had expected 4,000,000. It is stated locally that the expected results were not obtained because a percentage of miners did not present themselves regularly for work throughout the long and pleasant summer. The chairman of the Cambrian Company stated publicly that he thought it was the general experience in the coal field that in good times workmen preferred greater leisure rather than more wages.

The minimum-wage act, however, was drafted and passed for the advantage of the lower-paid day worker, for whom an average weekly wage before the passing of the act was \$6.19, raised by the act to \$6.91, and is now over \$7.

It is admitted by labor leaders that the existing and anticipated quiet of the current year is largely preparation for a coming great struggle. Labor energies are concentrated on strengthening its numerical and financial forces to meet special conditions which will arise at the end of 1914 and in the early months of 1915.

For the first time in the history of coal mining, all agreements between labor and capital throughout Great Britain end at the same time. So also do agreements between the railways and their employees. The minimum-wage act, passed in 1912 for two years, expires by its own terms.

The Miners' Federation and the various railway unions are expected to render mutual support in securing their respective demands. Miners' representatives openly refer to the coming upheaval as a bigger industrial upheaval than the country has ever witnessed.

Southern Machinery Dealers.

The Southern Supply and Machinery Dealers' Association at its annual convention last week at Houston, Tex., elected John A. Harvin of Houston, president; J. D. Belding of Augusta, Ga., and Ernest Howell of Charleston, W. Va., vice-presidents; Alvin M. Smith of Richmond, secretary and treasurer, and I. F. Young of Birmingham, Ala.; S. M. Price of Norfolk, Va., and James Schenck of New York, members of the executive committee.

To Build \$300,000 Plant.

Swift & Co. of Chicago will build a cotton oil mill, cotton oil by-product mill and fertilizer factory at Augusta, Ga., about \$300,000 to be invested for site, buildings, machinery, etc. This plant will require buildings occupying nearly seven acres of land, and it is to be operated by about 500 electrical horsepower. A ten-acre site has been purchased at about \$10,000.

1,350,000 Barrels of Fuel Oil.

A big contract for which proposals will be opened by the Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General, Washington, D. C., will require furnishing 1,350,000 barrels of fuel oil. Bids are to be opened on May 15 and delivery of the oil will be in the east and the west. Prospective bidders are to ask for schedule 6645.

*United States Consul Lorin A. Lathrop in Daily Consular and Trade Reports.

South and National Drainage Congress

FAR REACHING IMPORTANCE OF THE GATHERING TO BE HELD AT SAVANNAH NEXT WEEK.

[Special Dispatch to Manufacturers Record.]

Savannah, Ga., April 14.

Savannah is preparing for the National Drainage Congress. A large attendance is expected of leading people interested in the problems connected with drainage, including National Government officials, State authorities and drainage engineers. Much interest is attached to the visit and address of Sir William Willcocks, who designed the Assouan dam, and who is regarded as one of the world's greatest authorities on irrigation and reclamation. There will be interesting discussions of the problems both from the economic and engineering standpoint, connected with reclamation work.

The National Drainage Congress is to be held in Savannah largely for the purpose of awakening the people of the South to the full importance of the reclamation of the wet and swamp lands of this section. Its promoters desire to bring about the adoption of a plan for governmental supervision of and co-operation in reclamation. In brief, this plan is for the national government to create a fund of \$30,000,000, of which \$10,000,000 is to be from sales of Government lands and the balance by direct appropriation. This fund is to be placed under the control of the Interior Department, which is to be clothed with authority, when requested by drainage districts or States, to investigate the feasibility of drainage operations, to supervise the work if so requested, and to have authority to invest the \$30,000,000 fund in the purchase of drainage bonds issued after a favorable report by its engineers by districts or States. These bonds are to be a first lien on the property drained, and are to be redeemed from year to year. They can be held by the Interior Department or sold, as may be deemed best, and the fund re-invested in more bonds. In other words, this \$30,000,000 fund is to be the working capital. When drainage work involves river improvement, the work is to be done in connection with the War Department. It is said that the Congress is not committed to the National Government's undertaking the vast reclamation work of the country, but only to co-operate with districts and States, and then only as requested, by investigation and supervision, so that the work can cross State lines and include navigable streams in its operations, using the working capital fund for the purpose of buying, and if necessary placing bonds on properties reported on favorably.

There are about 75,000,000 acres of overflowed and swamp land in the United States available for drainage or reclamation. This constitutes one of the greatest potential assets of the country. This area is more than twice as great as the total area on which the South's cotton crop, now annually worth \$1,000,000,000, is produced.

This overflowed or swamp land, however, is on the average far more fertile than the average land devoted to cotton raising. It is far more fertile than the average corn land of the country. The corn crop, the most valuable single crop produced in our country, amounts to about 3,000,000,000 bushels a year. If all of the available swamp land was drained and put into corn production it could produce a much larger crop than the total of the entire country, which now requires considerably more than 100,000,000 acres a year. In view of these facts, it is hardly necessary to emphasize the tremendous importance of the reclamation of the vast area of overflowed land. About two-thirds of this reclaimable swamp or wet land is in the South, this section being credited with about 50,000,000 acres. Some of this land is covered with timber, the drainage of some of it will be too expensive to make its utilization economically profitable for some years to come, but a very large part of this vast area of 50,000,000 acres can be drained at a very moderate cost.

It is a much simpler proposition to take surplus water off of overflowed lands than it is to carry water for irrigation to semi-arid or dry regions. A good deal of this wet land in the South is so situated that it can be drained of surplus water during the rainy season and be entirely irrigated should dry seasons make irrigation desirable.

The 50,000,000 acres of wet land in the South, much of it richer than the valley of the Nile, is probably not

intrinsically worth \$10 an acre at present, or not more than \$500,000,000. If drained, at a cost of \$10 to \$20 an acre, it would be intrinsically worth \$75 to \$100 an acre, and would yield annually probably \$50 or more per acre, whether in corn, cotton or other crops. Thus its value would go from \$500,000,000 at the outside to \$5,000,000,000 or more.

Some time ago an English banker who had just returned from Egypt, where his firm was heavily interested, told me that he had been buying cotton land in Egypt and paying \$300 to \$400 an acre for it. He did not think the price unduly high. And yet this Egyptian land is not equal to what a very large part of the millions of acres of wet lands in the South will be when drained.

The reclamation of these 50,000,000 acres would change a liability on the South to an asset worth \$5,000,000,000 or more. Not only would this enormous material wealth be added to the South by the drainage of these lands, but the health of all the sections close to these overflowed or swamp lands would be benefited.

Great progress has been made in reclamation work in Louisiana. Many thousands of acres have been redeemed and made to yield largely to the profit of mankind. Some millions of dollars of Western capital have been put into these reclamation undertakings in that State, which has about 7,000,000 acres of overflow lands. Louisiana has been leading the country in reclamation work. Later on Mississippi, Missouri, Arkansas, Tennessee and North Carolina have followed Louisiana's lead.

Only last week a contract was made with a Western concern for reclamation work amounting to over

\$550,000 in Mississippi. Some very large undertakings are being carried out in North Carolina, and one of the pumping plants which is being established in connection with one of these reclamation enterprises will, so the engineers claim, be the largest pumping plant in the world.

The subject is one of tremendous importance from many points of view. This reclamation work, if carried out, through the utilization in the South of all the reclaimable land of this section would add enormously to the healthfulness of large areas, would add billions of dollars to the wealth of the South, and would enable this section to produce on this drained land almost as great a value as the total of all of the South's farm crops at present.

Drainage or reclamation of wet land is not an experiment any more than irrigation, and irrigation has been an active factor in human advancement for thousands of years. Connected with this work, however, are many questions of far-reaching importance.

It will be very well at such a gathering as the National Drainage Congress, when many of the foremost engineers of the country and abroad, men who have been studying every phase of the drainage problem, that there should be a very full discussion of the engineering and economic features connected with drainage work, of its importance to the whole land, and especially to the South. If the 50,000,000 acres of wet lands which now comprise a great liability to the South can be turned into a five billion dollar asset, and instead of menacing the health of large sections, be made as healthy as any other part of the land, then the work of the MANUFACTURERS RECORD and all other influences for years past in arousing the country to the value of reclamation will be justified. Recently one of the foremost manufacturers of the South, G. Gunbie Jordan of Columbus, Ga., said to me that he believed the work of the MANUFACTURERS RECORD in behalf of reclamation was probably the most important work it had ever done for the South.

RICHARD H. EDMONDS.

Bonded Cotton Warehouses for the South

The bonded cotton warehouse plan in which James B. Duke of North Carolina and New York is deeply interested is to be the feature of addresses by President Frank A. Vanderlip of National City Bank of New York and others at the banquet on the evening of April 27 of the American Cotton Manufacturers' Association. The association will meet in New York city April 27-28, when the plan will be formally presented for consideration by the members. Stuart W. Cramer of Charlotte, N. C., president of the association, representing the Southern textile industry, in preliminary explanation says:

"Mr. Duke was in North and South Carolina a couple of weeks ago inspecting the Southern Power Co., Interurban Railway Co. and other properties in which he is interested. He mentioned to the manufacturers he ran across his idea of the warehouse question, and it was so convincing that we promptly set about some way of bringing it before the association.

"As our membership covers such a tremendous territory it was practically out of the question, both on the score of expense and inconvenience, to get representatives from all the Southern States to attend a hurried meeting; so, after careful consideration, it was concluded that the local manufacturers should form themselves into a temporary organization committee to get the thing into shape to formally present at the coming convention. The time was very short in which to act, for a few meetings were absolutely necessary, both down here and in New York, to talk the matter over with Mr. Duke and the bankers. Also, tentative organization papers had to be drafted in order to have something definite for consideration.

"Hence, the temporary organization committee was necessary, and is composed of three manufacturers from each North and South Carolina, with cotton merchants and cotton farmers associated therewith to such an extent as to get their point of view as well as that of manufacturers.

"At the Tuesday forenoon session, April 28, the temporary organization committee will make its report for discussion and consideration. If the association acts upon it favorably, it is desired to add to the organization committee three manufacturer members from each of

the other Southern States and to call a meeting of the whole committee for that same afternoon.

"In the meantime, therefore, it is earnestly urged that all cotton manufacturers carefully consider the matter, and, where possible, discuss it among themselves with a view to choosing additional members of the board of governors and other officers of the association in the different States, asking that they co-operate in attending to this important phase of the matter. Representative members from each State are desired, because this matter is of the greatest importance, not only to Southern manufacturing interests, but to the whole South. It is believed that this cotton warehouse plan can be utilized to furnish the South with the cheapest money in the world, and an abundance of it. The endorsement of the plan by leading bankers in the United States and their offering to take the paper in practically unlimited quantities assures that if we carry this scheme to a successful conclusion we will have taken probably the greatest step toward economic independence that has yet been made in the development of the South.

"Frankly, this proposition is whatever we make it. If we take hold of it in a whole-hearted, co-operative manner, working for the best interest of everybody concerned, we can make it a stupendous success; or, by indifference and lack of interest, we can let the plan die, or at least fail to accomplish all that should and can be accomplished with it. It is very encouraging that so far the plan has met with the warmest commendation from the press; that leading manufacturers all over the country who have talked it over approve it and are anxious to help it along, and that the banking interests of the whole country are ready and willing to back it.

"The business will not be controlled by banking interests; nor by Mr. Duke or other strong financial interests; nor by manufacturers, merchants or farmers exclusively; but it is intended to be worked out as a strong, independent, co-operative organization for the benefit of everybody concerned and administered and controlled by all who enter into it."

The program of the convention will include papers on "Spinning Tests of Different Government Standard Grades of Cotton," by N. A. Cobb of the National De-

partment of Agriculture; on "Studies in Foreign Cotton Goods Markets," by Ralph M. Odell of the National Department of Commerce; "The New Rules of the New York Cotton Exchange," by Arthur R. Marsh, and "The Textile Bureau," by John P. Wood. Reports by chairmen of committees will be made as follows: National Council, by Stuart W. Cramer; tariff and legislation, by R. M. Miller, Jr., of Charlotte, N. C.; trade abuses, by Censer Cone of Greensboro, N. C.; Duke warehouse plan, by Stuart W. Cramer; conditioning of yarn and cloth, by C. E. Hutchinson; international federation, by James P. Gossett of Williamston, S. C.; census returns, by Ellison A. Smyth of Greenville, S. C., and cotton exchanges, by Lewis W. Parker of Greenville, S. C.

TO MANUFACTURE ALUMINUM.

A \$12,000,000 Corporation Preparing to Develop 105,000 Hydro-Electric Power.

Construction is rapidly progressing upon the hydro-electric plant and aluminum works which the Southern Aluminium Co. began last June $1\frac{1}{2}$ miles from Badin, N. C. This \$12,000,000 corporation, controlled by French capitalists, will develop 120,000 horse-power (75,000 being the immediate development) and manufacture from 15,000 to 25,000 tons of aluminum annually. It has abandoned the old Whitney dam and located its water-power and factory site $4\frac{1}{2}$ miles farther down the Yadkin River at a point where the river is only 140 feet wide. Here the contractor, the Hardaway Contracting Co. of Columbus, Ga., is building a dam 1400 feet long, 160 feet wide at the bottom and 20 feet wide at the top, of cyclopean concrete. This is a hollow dam with considerable curve, the convex side being upstream, to contain about 360,000 cubic yards of concrete. Just below the dam is being erected the power-house, 580 feet long by 60 feet wide, to contain (with appurtenances) 40,000 cubic yards of concrete. The power-house lies lengthwise with the river, and water will be conducted to its turbine by a canal. The gates will be set 25 feet below the top of the dam, sending the water into the turbines with a head of 175 feet. Other construction will make the total masonry work aggregate 450,000 cubic yards, and there will be about 650,000 yards of rock excavation. The installations of machinery will include sixteen 5200-kilowatt direct-current 550-volt machines and two 100-kilowatt alternating-current 6600-volt machines, practically all of the electrical energy developed to be utilized for aluminum manufacture. At Badin the company is building its electrode plant, the structural steel being in position. For this plant will be required nine buildings, wherein will be manufactured the long carbons for conveying electricity to the electrolyte in the aluminum plant furnaces. This department may begin manufacturing within several months by utilizing electricity from the Southern Power Co.'s transmission system, from which the contracting company obtains its supply of electricity. This transmission system consists of a seven-mile line on standard steel towers, built especially for this contract, furnishing 5000 horse-power to drive the air-compressing plant and other machinery used in construction. About \$500,000 is the value of the plant being used by the contractor, the equipment including a \$100,000 crushing and mixing plant, 25 40-horse-power hoisting engines, 80 drills, 14 locomotives, 88 cars, 10 miles of standard 70-pound steel rails, etc. Besides the electrode buildings, the Southern Aluminium Co. is constructing an office building, repair shops, transfer and storage buildings, foundry, etc. All the construction will require about 650,000 barrels of Portland cement, and it has been claimed this was the largest cement contract ever made in this country excepting those for the Panama Canal and the New York subway. There will be four furnace buildings for the aluminum works, each to be 395 feet long by 40 feet wide, and four transfer, storage and foundry buildings, each 820 feet long by 40 feet wide.

At Badin (named for the president of the company, who is of Paris) the company has provided a thriving little city with modern facilities for comfort and convenience, it having now about 600 men on its payroll, while the contracting company is employing about 1200 men. At Whitney the company has built modern homes for its officials, who include W. P. Marseilles, general manager, and P. Bunet, chief engineer and vice-president, both of Paris, located here to superintend construction to its completion. Construction is now pro-

gressing at such a rate that it is probable the hydro-electric plant and aluminum works will be completed within two years, and then permanently employ 1500 men until there is a necessity for increasing capacity. The Heroult process for extracting aluminum will be used, and Dr. Heroult, the originator of this process, has visited the site of this North Carolina proposition.

This is one of the most important enterprises ever undertaken in the South, and its completion will mark the investment of \$12,000,000 by French bankers and manufacturers who have had many years' successful experience in the manufacture of aluminum. These capitalists gave long and serious consideration to this proposition before undertaking the expenditure of this large amount of money, having become interested in the Yadkin River and its water-power resources because of their investments in the original Whitney company and its successor. Having finally purchased all rights, it was found advisable to locate the power plant at a site more advantageous than the old location at Whitney and to use all the electrical energy for the manufacture of aluminum.

The Birmingham Iron Market.

[Special Correspondence Manufacturers Record.]

Birmingham, Ala., April 11.

The pig-iron market in Birmingham has been quieter since April 1 than at any time during the preceding six months, the sales being lighter and the inquiries fewer than for months. The furnace interests have shipped from the block the output of the furnaces, the orders received months ago for first and second quarter delivery being filled as fast as the iron can be made. The prices prevailing in March have been maintained, and while there has been an effort to push the price of No. 1 foundry below the \$11 price, this has not been successful. The Tennessee Coal, Iron and Railroad Co. this week shipped 500 tons of special analysis iron to Genoa, Italy, the shipment going via the Frisco and Illinois Central to the port of New Orleans, this being the only export sales reported since the first of the month. The following are the prices gross, f. o. b. cars Birmingham:

- No. 1 foundry and No. 2 soft, \$11.25 to \$11.50.
- No. 2 foundry and No. 2 soft, \$10.75 to \$11.
- No. 3 foundry, \$10.25 to \$10.50.
- No. 4 foundry, \$10 to \$10.25.
- Basic, \$10.50 to \$11.
- Charcoal iron, \$23.50 to \$24.

The old material market shows little improvement, a light demand, but some sales and some good shipments, with no advance in prices, which are as follows, f. o. b. Birmingham:

- Old iron axles (small), \$15 to \$15.50.
- Old steel axles (light), \$15 to \$15.50.
- Old iron rails, \$12.50 to \$13.50.
- No. 1 railroad wrought, \$12 to \$12.50.
- No. 2 railroad wrought, \$10 to \$10.50.
- No. 1 country wrought, \$9.50 to \$10.
- No. 2 machinery cast, \$10.50 to \$11.
- No. 1 steel scrap, \$10.50 to \$11.
- Tram car wheels, \$10.50 to \$11.
- Standard car wheels, \$12 to \$12.50.
- Light cast and stove plates, \$9 to \$9.50.

The cast-iron pipe market is still very quiet, although some of the interests have booked some good orders during the past 10 days, and at the United States Cast Iron Pipe & Foundry Co. an additional pit has been placed in operation to fill existing orders. The pipe concerns are hopeful that a better condition will be seen within a few weeks, as many municipalities are selling bonds and will buy pipe for improvements contemplated months ago.

While the iron and pipe market has been quiet, all believe that the condition is only temporary, and will soon give way to a brighter outlook and plenty of business.

This week the Superior Pipe Co., a new corporation, broke ground at Bessemer for the erection of a cast-iron soil-pipe plant. The capital stock of the company is \$50,000, with \$35,000 paid in, and a site of seven acres just outside of the city limits has been secured. The main building at present will be 75x200 feet, and the machine and pattern shop will be 25x100 feet. The following are the officers of the company: Wiley Alford, president and treasurer; W. C. Martin, vice-president; A. M. Shook, secretary, and John Birdwell, general manager, all Birmingham men. The company will employ 75 men to begin with, and the plant will be ready for operations within 60 days. It is also stated on good

authority that another pipe plant will go to Bessemer, and this concern will work about 250 men. Negotiations are in progress for a site for this plant.

Mississippi Farm Possibilities.

Under the auspices of the Industrial and Immigration Department of the Illinois Central and the Yazoo & Mississippi Valley Railroad Companies, 25 demonstration farms were operated last year, all of them except one in Mississippi. A special report of results has been made showing the itemized cost of teams, labor, fertilizers, seed and harvesting and ginning, the value of crops, the gross profit, the net profit and the profit per acre. The crops included corn, peas, potatoes, silage, oats, straw, soy-beans, soy-bean hay, tomatoes, cabbages, sweet potatoes, rice, lespedeza, melons, peanuts, pumpkins, carrots, sugar cane, peavine hay and ramie. The average gross proceeds per acre were \$40.54 in a region in which the average production per acre for all farms in 1910 was \$15.78, so that under methods pursued on the demonstration farms in 9,000,000 acres of land in cultivation in Mississippi would yield annually \$222,750,000 more than they are yielding at present. In presenting the report Charles N. Brumfield, agriculturist in charge of the demonstration, says:

"Those crops are most profitable which can be produced most economically with the greatest degree of certainty. Economic production means meeting the requirements of the particular crop grown. By certainty of production, we mean where the limitations are reduced to the minimum. Cotton has been considered the main staple crop in Mississippi and Louisiana since they have been settled, except that portion of Louisiana devoted to sugar cane and rice; but it is my opinion, and this is based on the facts of my experience, where cotton has been grown with the full infestation of the boll weevil, that it is and has not been a profitable crop; besides, the limitations to its production are so great that it is not raised with any reasonable degree of certainty. I do not mean to say by this that it is impossible to grow cotton under a maximum infestation of the weevil. The reason I allude to this pest in this report at all is to better emphasize to you the great importance of diversification of farm crops along our lines in Mississippi and Louisiana. Live stock is the basis of all profitable agriculture. Nowhere in the South can a greater abundance of splendid feed crops be grown than in Mississippi and Louisiana. Pastures are green with clovers and grasses for ten months in the year and beef production and pork production and mule raising and milk production, should receive, in my humble judgment, most attention from all organizations and forces that are at work in this part of the State for the betterment of agricultural conditions. The South must become the future breeding and feeding grounds of live stock. Mississippi and Louisiana, when properly appreciated, will be the center of this industry. I wish to call your attention to the number of our farms on which we have growing clover crops. We have crimson clover on four farms and oats on all of those farms where it was practical to plant them."

President G. R. Hightower, of the Mississippi Agricultural and Mechanical College, writes to Mr. Clair:

"It is with interest that I note the results obtained on the demonstration farms operated in Mississippi under the direction of the agriculturists employed by your railroad company. This work is making progress in the right direction. It exemplifies the proper methods of agriculture, and, if followed by the people who observe it in your various communities, will be the means of putting them on a progressive and successful career."

"Your average net yield of \$21.00 per acre on the 25 demonstration farms in the various sections of the state is conclusive evidence that Mississippi is capable of producing a much greater yield than she is now turning out. With the trend of immigration southward constantly increasing, your concrete examples and demonstrations will become more effective and more useful year by year. I assure you that the Agricultural and Mechanical College of Mississippi will co-operate with you in every way possible in this great work."

J. Allen Smith has been elected president of the Board of Commerce of Knoxville, Tenn., and Joseph W. Bowles, assistant secretary.

Controlling Coosa River Power

FIRST UNIT OF HYDRO-ELECTRIC DEVELOPMENT AT LOCK NO. 12 IN OPERATION.

[Special Correspondence Manufacturers Record.]

Birmingham, Ala., April 11.

Early in the week the first of the four 17,500 horse-power generating units of the hydro-electric plant of the Alabama Power Co. at Lock 12 on the Coosa River was placed in operation and is working to the entire satisfaction of the engineers. This unit, which is said to be the largest of a single runner type ever installed at a hydro-electric operation, is the first of the 70,000 power development of the Alabama Company, which is spending millions of dollars in Alabama. It is estimated that the operation of this plant will save in fuel 500,000 tons of coal per year to the Birmingham district—the coal taken to generate the steam power equal to the electric energy which will be available from this operation. In addition to conserving this large tonnage of coal the development, it is said, will make navigable a long stretch of the Coosa River, and will enable the Birmingham district and State at large to procure an abundance of hydro-electric power.

In a report made on this development, in reference to conservation of coal, it has been estimated that if all of the navigable streams of the State were so developed the electric energy thus created would equal the energy of 11,101,000 tons of coal per year. The maximum water-power energy of Alabama, it is claimed, would develop 1,108,000 horse-power and render navigable a great many miles of streams. Alabama produces 16,000,000 tons of coal per annum, or about that tonnage, and if the electric energy was utilized the State would save, it is estimated, 80 per cent. of the coal production.

In 1912 the Alabama Traction, Light and Power Co. was organized with a capitalization of \$50,000,000 for the development of water-powers and the operation of public utilities in the State of Alabama. This company controls and has merged with it the Alabama Power Co., the Alabama Power Development Co. and the Alabama Inter-State Power Co., and has purchased and now operates the properties in five cities of Alabama, viz.: New Decatur, Huntsville, Anniston, Talladega and Attalla, all in the northern portion of the State.

Already there is in operation a water-power plant at Jackson Shoals and the steam plant completed late in 1913 at Gadsden. These are in addition to the plants mentioned above. The greatest development, however, of the company is that on the Coosa river, at Lock 12, just half way between the city of Birmingham and the city of Montgomery, 50 miles distant from each place. The plans of the company contemplate the development of other hydro-electric plants.

It is at Lock 12, in the Coosa river, that the great developing has gone ahead and wonders have been wrought at that point since the first of January, 1912. At Lock 12 a gravity type dam, of cyclopean concrete, nearly 1500 feet long and 80 feet high, has been constructed, the height of the dam giving a head of 68 feet. The large power-house, being part of the dam, reaches for 324 feet out into the river from the western bank, the width of the building being 80 feet; while at the east of the dam a lock for navigation will be built, this being at the mean end of the dam.

Four 17,500-horsepower vertical single-runner turbines have been installed, leaving space for two units of the same capacity. These turbines are the largest single units ever installed in this country to operate under a head of 68 feet. The runners of the turbines are of cast iron in one piece, being 13 feet 3 inches in diameter, and the speed is 100 revolutions per minute. In every department of the construction the most improved patterns have been selected and placed, and at no place in the South will there be more thorough equipment in the way of turbines and generators, for reducing the cost of operating and a reduction of maintenance cost. The single-piece shaft of the turbine runners connect directly with the generators, which are Westinghouse 3-phase 60-cycle 13,500 K. V. A. (10,800 kilowatts at 80 per cent. power factor) 6,600-volt 100 R. P. M. machines. The units are unique for their simplicity and compactness, and are entirely self-contained.

A transmission voltage of 110,000 volts was decided upon and adopted and there are two double-circuit transmission lines using towers to carry the

power, one starting from Lock 12 and coming 50 miles to Birmingham to a sub-station at Magella, a few miles south of the city, while the other crosses the Coosa and goes to Gadsden, via Syllauga, Talladega, Jackson Shoals (where the 2000 horse-power water plant is located), then to Anniston and Gadsden, tying at Gadsden, where the steam plant of 15,000 horse-power is situated. The transmission line from Anniston to Gadsden—27 miles—is of a double circuit, constructed on Miliken Bros.' towers. These towers are spaced on an average seven or eight to the mile, with 1990 feet the longest span and an average span of 672 feet. There are three types of the towers, known as A, B and C. The style used in traversing a rough country is type A, which weighs 4,500 pounds and is 68 feet high. These towers are erected with an all metal footing, 2.5 feet square, set 7 feet in the ground with no concrete, the base line being 15 feet square. The tower is designed for normal spans of 700 feet, with a 1200-foot maximum.

On flat sections of country a lighter tower is used, type C, placed every mile and weighing 4,700 pounds. As in type A, these towers carry two ground wires. The strain towers are known as type B, and weigh 4700 pounds, with a base 17 feet square.

At the dead end, where the sub-stations are placed, an extra heavy tower weighing 9000 pounds is used, of the same design as other strain towers. At the point where the 22,000-volt line from the steam plant at Gadsden crosses the Coosa River a special double AA type tower is used, 80 feet high and span of 600 feet. Where the Coosa River is crossed at Seddon, Ala., on the line from Jackson Shoals to Birmingham, an enlarged design of regular line tower is used for a span of 1050 feet. These two towers weigh 30,000 pounds each.

Telephone service was desired and installed on 22-foot poles, 10 feet from the right of way, the poles having a single cross-arm. Electrolytic lightning arresters are installed on all 110,000-volt lines as they leave the generating station and just before the lines go into transformers at Anniston, Jackson Shoals and

all sub-stations except Birmingham, where they are placed on the lines.

There will be distribution for 22,000 volts and for a single circuit, while double-circuit lines will be built on either poles or flexible towers. Both pole and tower lines will carry a ground wire. At Gadsden, Anniston, Jackson and at Magella, near Birmingham, 110,000-volt sub-stations are already installed, with the installation of sub-stations of 22,000 voltage located at Talladega, Leads, Lovick, Alex City, Gadsden and Attalla. At Gadsden the sub-station will be designed to take care of 110,000 volts transmission lines.

Transformers are single phase, 2100 K. V. A., with each winding designed for full capacity. These are the first of the kind installed in the South. All of the transformers and switches are of the outdoor type. The Gadsden steam plant is located on the bank of the Coosa River, two miles from Gadsden, the construction having been commenced in November, 1912, and completed in July, 1913, the work breaking all records for its completeness and for being ready for distribution in nine months. The station has a generating capacity of 12,500 K. V. A., and will serve to build up the load for the present water-power system until it is operative, when it will be used as a reserve plant.

The possibilities of the company in Alabama cannot now be even considered, for, with lines extending from Mobile to Huntsville and to every town of any considerable size within the State, the coming of cheaper light, heat and power is assured, and, as the company branches out, those plants and places will be benefited that have been compelled to depend upon high coal rates, making it almost impossible to conduct a business on a working basis. The development of the Coosa will be followed by other developments of like nature.

To give some idea of the large work carried out by the Alabama Power Co. at Lock 12 the following figures may be of interest:

During construction the maximum number of men on the pay roll was 2500; average number of men on pay roll for the year, 1000.

The pay rolls total \$1,000,000, all spent in Alabama. Transportation of men to work has cost \$100,000.

Total freight and demurrage was \$350,000.

Barrels cement used, 210,000; sand, 100,000 cubic yards; gravel, 25,000 cubic yards; stone, 130,000 cubic yards.

For a Realization of the Steel Possibilities in the South

By HUGH W. SANFORD, Secretary Sanford-Day Iron Works, Knoxville, Tenn.

The future prosperity of the South depends as much upon its steel as upon its cotton. Both agriculture and manufacturing create wealth, and it is production, by farm or manufacture, that increases the world's resources. Retailing or jobbing create nothing but service. They are necessary functions, of course, but add nothing material to the wealth of a community.

The South does not want to spend its entire energies earning a living by jobbing on a commission basis the goods manufactured in the North. The South prefers to give the North a commission for selling articles manufactured in the South.

Of all lines of manufacturing, the iron and steel industry is the greatest. This industry has created more wealth and employed more labor than any other. The steel industry is called the "barometer of trade." Coal, lumber, in fact almost every other line of trade, rise and fall with steel. Each year steel is playing a larger part in our lives. It is taking the place of lumber in many of the arts. Today almost all railway equipment is being made of steel instead of wood. Steel is rapidly replacing wood for building interior finish and even for office furniture.

Every man is individually interested in the cost to him of iron and steel products. The nails that build his house, the iron piping of his plumbing, his heating furnace, the screens in the windows of his house cost more or less, according to the price of steel.

Every tool the farmer buys would be sold cheaper if the cost of steel was reduced.

The Southern people are, therefore, individually interested from two distinct standpoints in the price of steel,

and in the history of steelmaking in the South. First, in the price of steel as affecting prices of commodities, and second, of greater importance, in the possibility of creating a large manufacturing industry in the South using iron and steel products.

Up to 1907 no steelmaker in the South had made a great financial success. The industry was considered a precarious one. Many problems had to be solved before cheap steel could be produced here. A tremendous investment of capital was required. To make steel cheap it must be made on a very large scale. This takes a great deal of money. If the large output exists, a large demand is required to consume it. This consumption in the South did not exist before 1907, and does not exist today. It therefore follows that the concern which makes a large success of the steel industry in the South must have a very large capital, and also have enough outside income to be able to stand a loss, if necessary, for several years until the demand for its products enlarge sufficiently to take the output of the large mills that can produce quantities of steel at low costs and low selling prices. The demand cannot increase rapidly unless the low selling price is inaugurated.

The Tennessee Coal, Iron & Railway Co. before 1907 was not such a concern. It had no working capital to spare. It needed every cent it could get hold of. It had to receive the highest prices for its products to subsist. Its mills were small and old-fashioned. It did not have modern machinery or other facilities making for low costs. It did not produce large tonnage. Its customers were comparatively few, and were small buyers.

It made but a small range of steel products. The flurry of 1907 was too great a financial strain for such a weak company.

The old Tennessee Coal, Iron & Railway Co. had plenty of raw material, plenty of iron ore in the ground, plenty of coal and limestone, but what else? Its stock was not particularly attractive to the Southern investor. Before the Tennessee Coal, Iron & Railway Co. could develop rapidly or be a great success financially a powerful hand with many millions back of it was needed. There was no such hand in the South, and none of the independent steel mills in the North seemed to think the venture an inviting one.

Before 1907, as a result of these conditions, the Tennessee Coal, Iron & Railway Co., with a small output from old-fashioned plants, asked the Southern consumer the very highest prices for its products. If the customer was in Birmingham he paid the Tennessee company the price of the steel product at Pittsburgh, Pa., with a freight added from Pittsburgh to Birmingham of about 30 per cent. additional. This 30 per cent. in freight was an extra profit to the Tennessee company, thus the users, the consumer of steel products in the South, had to pay about 30 per cent. more for his raw material than his competitor of the North.

To illustrate the effect of this on the business of a Southern manufacturer using steel products, let us take a concrete example. In the writer's business in Knoxville, Tenn., we use steel bars largely in the manufacture of mining machinery. Before 1907, when steel bars sold for \$30 per ton at Pittsburgh, Pa., this steel cost the writer \$37.50 per ton delivered at Knoxville, whether it was shipped from Birmingham, Ala., or Pittsburgh, Pa.; the actual freight rate from Birmingham at this time was only \$2.60 per ton, as against \$7.60 per ton from Pittsburgh. The Tennessee company pocketed the \$5 per ton freight saved and they needed it to exist. On such a basis of prices our competitors in Pittsburgh could actually deliver their products to Middlesborough, Ky., cheaper than we could. Middlesborough, Ky., is 60 miles from Knoxville, yet without sacrificing part of our legitimate profit we could not at Middlesborough, Ky., meet Pittsburgh, Pa., competition.

The farther north we tried to do business the worse this situation became. We could not ship to Jellico, Tenn., 70 miles from Knoxville, on a basis equal to the Pittsburgh manufacturer. The only market we had was south of Knoxville in Alabama, and even here we had no real advantage over the Pittsburgh manufacturer, with his low prices on steel products. When it came to business in neutral territory, such as west of the Mississippi, Canada or even Western Kentucky, West Virginia, Illinois or Indiana, Iowa or Missouri, we were hopelessly handicapped.

What was true of our business was doubtless equally true of every manufacturer of steel products in the South. The engine-builder, the boiler-maker, the manufacturer of agricultural machinery, what chance had he in the South? If he was satisfied with a small local business with his close neighbors he could exist. But what chance was there under such conditions for the South ever to grow up in the manufacturing of iron and steel products in a large way? Business was stunted in its infancy. It had no chance to grow into a country-wide business on a big and profitable scale.

Under such conditions, if a new plant was built for making any line of machinery requiring a large amount of steel, would it be built in the South? Truly not. It might almost be said that the few plants in the South manufacturing steel products commenced in ignorance of the conditions in the South.

An employe in the sales department of the old Tennessee Coal, Iron & Railway Co. before 1907 told the writer that any number of large manufacturers advised with him about locating plants in the South. They would have done so if the Tennessee Coal, Iron & Railway Co. could give them prices at Birmingham, Ala., the same as at Pittsburgh, Pa. But the Tennessee Coal, Iron & Railway Co. simply could not afford to do this.

Up to 1907 what possible chance, therefore, had the South to grow largely in the manufacturing of steel products? The condition of the Tennessee Coal, Iron & Railway Co. was probably improving every year, and in many years it might possibly do for the South what the United States Steel Corporation is now doing, but it would have taken without doubt at least 25 or 50 years.

On top of this, remember the South has every natural advantage in steel production. There is no reason why the South cannot take the steel supremacy away from Pittsburgh if she is allowed to continue the way she has now started. She will surely do so if the United States Steel Corporation is allowed to complete her mills and

plans for the South, and, if the Corporation then does for the South in the way of prices on her products what we have every hope and reason to expect. With modern mills for large tonnages finished and running, it would certainly be poor business policy if the United States Steel Corporation did not build up the demand for steel products in the South by encouraging the use of steel in the South by giving the manufacturing consumer prices that would enable him to compete with the Northern manufacturer. In fact, today the Corporation is already helping out the Southern consumer on the prices of steel. The Corporation is giving the Southern user about half the freight from Pittsburgh, Pa. The Southern manufacturer is already encouraged to get busy and fight for business in neutral territory.

For example, steel plates are sold from Birmingham, Ala., at \$28.00 per ton delivered Knoxville, Tenn. The price for delivery at Knoxville from Pittsburgh, Pa., is \$30 per ton. Steel bars can be bought for \$28.00 per ton delivered Knoxville from the Corporation at Birmingham. The price of the Corporation on bars delivered from Pittsburgh, Pa., to Knoxville is today \$31.60 per ton.

Since 1907 the United States Steel Corporation has spent in the South approximately \$19,000,000. They have rehabilitated their iron mines, their coal mines, their plate mills, their rail mills. They have recently started a magnificent new wire mill. The price on wire from Birmingham is still high. It should now be reduced to the Southern consumer. The Steel Corporation has also spent an enormous sum on a large reservoir and power plant. In fact, they have been building in Birmingham in a large way, with the evident idea of eventually making the South a powerful factor in the steel industry. The writer has been told that an additional \$14,000,000 had been appropriated for spending in the South to carry out the schemes already planned.

This \$14,000,000 on top of the \$19,000,000 already spent will finish large modern mills for the making of steel rail, plates, bars, wire and structural shapes in such a large way that the South will immediately become an important influence in the steel industry. And this is merely the beginning.

And why shouldn't the Steel Corporation make the South a dominant factor in the steel industry? In world competition steel must be produced in the largest quantities where it can be produced the cheapest. It has been fully demonstrated that with properly equipped mills and with a sufficient capital expenditure on mines, coke ovens, etc., steel can actually be produced in the South cheaper than anywhere else in the United States. The Corporation certainly was satisfied of this before she came South in this large way. In the South the iron ore, coal and limestone are all close together, and in the North this is not true. Until recent years steel was almost universally made with low-phosphorus Bessemer ores. The pig-iron at Cranberry, Tenn., is probably the only pig-iron in the South suitable for making Bessemer steel. By the basic process steel better than Bessemer can be made from pig-iron such as the South makes everywhere. This basic process gave the South her big chance in steel.

Yes, the South can really produce the cheapest steel in the United States. This is no longer questionable. Our iron ore is not as rich or as good as the Michigan ores, but it costs less to get. Our coke is of good quality, lots of it as good or better than Connellsville. We have an abundance of limestone. We can and do make pig-iron cheaper than in the North. Today the South is selling a large percentage of her pig-iron north of the Ohio River at a freight rate disadvantage equal to about 20 per cent. of the selling price. No Northern pig-iron of similar quality is ever sold in the South.

The South, therefore, has cheaper pig-iron, coke as cheap, cheaper labor and a milder climate. Nature has generously blessed the South with as great advantages in the iron industry as she has in the cotton and textile industries. The manufacturing of steel into finished products should eventually be centered in the South in as large percentage and with as rapid a growth as the cotton industry. Today the one need of the South is a battery of large mills producing cheap steel of every sort in a big way and selling it cheap to Southern users. As soon as this last condition exists the South will have come into her own. The South will then rapidly become the largest manufacturing section of this country. Her growth will be in great leaps. She will have no rival in agriculture or manufacturing. How can she logically keep from taking the lead? How can any new manufacturing plant start in the North in face of cheaper pig-iron, cheaper steel, cheaper fuel, cheaper

labor, cheaper buildings, and a milder climate in the South? Labor will always be cheaper in the South, because in the mild climate the laborer does not need to live so expensively. The advantage of the South in manufacturing can never be destroyed. It is truly a gift of Nature.

Until the United States Steel Corporation in 1907 took charge of the affairs of the Tennessee Coal, Iron & Railway Co. the steel industry in the South was in the shape of a new industry in a new country struggling to get started in competition with a mammoth concern from abroad selling its products in the new country without tariff and at prices low commensurate with a tremendous production. What chance has the infant industry to make a success and grow? What chance had the old Tennessee Coal, Iron & Railway Co. to fight against the Pittsburgh concerns, with their modern mills, tremendous outputs and low costs? In time, even without outside help, the Southern producers, benefitting from their natural advantages, would undoubtedly have accumulated the capital necessary to get in active competition with Pittsburgh, Pa. But it would have been a long, hard fight and many years before the old Tennessee company would have been able to accumulate the \$34,000,000 which the Steel Corporation is now spending in the South.

DALLAS UNION STATION.

Interesting Features of the \$900,000 Passenger Terminal Under Construction.

[Special Correspondence Manufacturers Record.]

Dallas, Tex., April 10.

Construction work is now under way on the Dallas union passenger station, which, when completed, will be one of the largest and most elaborate in many respects of the passenger terminals in the South.

Over 10 acres of land have been secured immediately adjacent to the business center of the city, beginning two blocks south of Main street, fronting on the Trinity River and covering a space of two blocks between the river front and Houston street. The ground itself cost \$3,500,000, and the cost of the building will be in the neighborhood of \$900,000. The main building will have a frontage of 282 feet on Houston street, with a depth of 135 feet, and will be set back 35 feet from the building line.

The present plans call for 10 tracks, and it is estimated that this will accommodate without congestion 250 trains a day, or double the amount of traffic now passing through Dallas. Provision is made for 18 tracks to be put in as needed, and which will accommodate the expected travel for the next 15 years. It will be used by all of the nine trunk lines of railway which enter Dallas, and which formerly handled their passenger business from five separate stations, all of which have long ago been outgrown, and the elimination of which and the consolidation of the passenger business in one place will be of great convenience and advantage to the traveling public.

The building, which is being constructed under the direct supervision of Chief Engineer C. H. Dana of the Gulf lines of the Santa Fe, who has been loaned to the Union Terminal Co. for that purpose, from plans drawn by Jarvis Hunt of Chicago. Mr. Hunt designed the new passenger terminals at Kansas City, and one distinct feature of the Kansas City plans will be used here. This feature provides for enlarging the first capacity of the station by adding new waiting-room space over the tracks, which gives practically unlimited scope for expansion.

The style of the architecture of the building will be Italian renaissance, which will give a massive and handsome effect. What is technically known as "massive construction" will be used, the walls in many instances being six feet thick, so as to secure the effect of massiveness and ornate dignity. The details of interior finish have not yet been worked out, but they will be in keeping with the exterior and general ensemble of the pile.

The facade will follow closely the accepted Italian style. Massive pillars will be supported on great square columns, and entrance will be had through highly ornate doors to the ground floor. Here will be the ticket offices for both railway and Pullman transportation and the usual information and other bureaus. Carriage entrances will be provided at the north end of the building, the carriage concourse being provided by a system of porte cocheres.

From the main floor a pair of broad and easy stairs

will rise to the main waiting-rooms. This is to be a magnificent room of great height of ceiling and of proportions carrying out the general idea of massiveness. Under a ceiling 40 feet in height the main waiting-room will occupy a space 70x123, opening on the west to the bridge leading to the train platform and on the east to a loggia 95x18 feet. In this climate open air is frequently most desirable, and this loggia, which is to be 95x15 feet in area, a balcony effect occupying the space between the great supporting columns of the facade, is expected to be popular with waiting passengers.

To the north of the main waiting-room will be the usual conveniences found in modern stations—rest-rooms, lunchroom, dining-room, kitchen, etc.

From the waiting-room entrance to train platforms will be had over a covered bridge 36x400 feet, easy stairways leading down from this to the train platforms, the umbrella type of construction.

Over 12,000 square feet of space will be given over to the handling of baggage and enough space to the post-office department to transfer its mails. No provision has been made for a terminal postoffice, but there is an abundance of land, owned by the terminal company, which will be available for the postoffice in the event it finds it desirable to construct a building for its own exclusive use.

The plan does not provide for any basements, bridges being made to do the work usually assigned to basements and tunnels, thus obviating any possible interference with traffic by high water. Baggage will be conveyed from the baggage-rooms by means of elevators to the baggage bridge, where they will be carried over the tracks to trains. A similar system will be used in the handling of mail.

As part of the terminal plant there will be coach and engine storage yards capable of taking care of 150 coaches, while a roundhouse with 12 stalls will be part of the equipment. But two lines terminate here, and the yards will be used principally for extra and emergency equipment and sleeping cars which cut out here.

The system of signaling and protecting trains while on the terminal block has not yet been adopted, but it will be either the electric or electro-pneumatic type and the most perfect and modern to be had. One controlling station will be built to the north and another to the south of the station proper, so as to handle trains expeditiously and with a maximum of safety, every precaution being taken to not only prevent accidents, but to move trains with the greatest possible expedition.

Announcement was recently made that the general contract for the terminal station had been let to James Stewart & Co. It appears that some developments have occurred which prevent the carrying out of such contract, and the matter has been referred by the Union Terminal Co. to a committee of its directors, with power to act. It is stated that some time within the next two or three weeks a new contract will be ready for letting, and meanwhile the preliminary work will be carried on by the Union Terminal Co.

It is the expectation that the entire improvement will be completed within 18 months. ALBERT PHENIS.

Indian River Farms Co.

Indian River Farms Co., Davenport, Iowa, is progressing with its development of 44,213 acres of land on Indian River, Florida, where it is expending about \$600,000 for canals, lateral ditches and subterranean ditches, etc. Its plans also contemplate constructing about 100 miles of surfaced roads, about half of this work being near completion. Developments include the town of Vero, the architecture of which is expected to embody buildings of Spanish design. Cement sidewalks are being laid, curbs and gutters are being constructed, streets are being built, buildings are being erected, etc. The company's large acreage will be developed mainly for farming, and about 70 families have been located during the past five months, these colonists having already prospects for a good crop. In the town the company is providing sites for municipal buildings, churches, industrial enterprises, etc. Indian River Farms Co. officers include: President, J. H. Hass, president of Scott County Savings Bank at Davenport, Iowa; vice-president, C. A. Banister, treasurer of Moline Plow Co., Moline, Ill.; treasurer and general manager, Herman J. Zouch, president of Morton L. Marks Company, Davenport; general sales manager, John Le Roy Hutchison, president of Hutchison-Hill Land Sales Co., Colorado Springs, Colo.

A Costly Dwelling for Miami.

The favor with which Florida is regarded as a place of residence by prominent people throughout the North and West is indicated by the increasing number who are expending large sums of money for the erection of handsome and expensive residences, hotels, resorts, etc. Typical of these dwellings and ranking as one of the most costly is one to be erected near Miami for James Deering of Chicago. General contract for the structure has been awarded to George Sykes, Inc., of New York, and construction will go forward at once. The dimensions of the building will be about 120x120 feet, with a 60-foot court in the center. It will be of reinforced concrete and semi-fireproof construction, with some of the interior partitions and a portion of the roof only of wood. The exterior will be of white stucco, with native stone and artificial stone trimmings, marble steps and porches. Floors are to be 4-inch reinforced concrete arched with steel beams. The roof will be of special mission tile and all metal work of copper, while the principal rooms will be supplied with mechanical indirect steam heat. Lighting will be obtained from the city lighting plant and storage batteries with motor generator set and storage batteries for motors. Two automatic electric elevators and one automatic dumbwaiter will be installed by the Otis Elevator Co. of New York, Washington and other cities. Plans and specifications for the structure were prepared by F. Burrall Hoffman, Jr., of New York, and J. A. McDonald of Miami will superintend construction. The general contractor will sublet the plumbing, heating, elevators, etc., and probably the cut stone work, artificial or cast stone and marble. He is in the market for cement, structural steel, reinforcing material, hollow tile, certain items of plant and equipment, contractors' supplies, etc. It is stated that the grounds surrounding the dwelling are to be parked, driveways constructed and the water-front beautified.

FOR SHIPYARDS NEAR NEW ORLEANS.

A \$5,000,000 Company of British and New England Capital Planning Big Plant.

It is reported that J. H. Bernhard, vice-president of the Mississippi-to-Atlantic Inland Waterways Association, New Orleans, is planning to construct floating shipyards for building vessels for inland waters and to ultimately enlarge for constructing ocean vessels, having purchased a site on the Mississippi River 10 miles below New Orleans. This plant is proposed to be in 10 units, 70x60 feet each, bids to be asked immediately on the first unit, and after this construction is in progress proposals to be invited on the tenth unit, which will be the machine shop of the plant. Upon completing these two units it is proposed to begin the remaining portion and complete the shipyards to a total length of 700 feet. The machinery is to be electrically driven, and the entire plant will employ about 1000 men. This enterprise is said to be financed by a \$5,000,000 corporation chartered by British and New England capitalists, who are to organize a Louisiana corporation as an operating company. It is expected that this plant will be an impetus to the movement for river and harbor improvements and inter-coastal canal construction. Mr. Bernhard plans to interest United States commercial organizations in an inland waterways bureau to assist in forwarding the movement mentioned. His work in organizing the physical properties of the Alabama & New Orleans Transportation Co., of which he is now vice-president, has been frequently referred to. His plan for the bureau embraces the idea of establishing banks that will, as do the European ship mortgage banks, furnish money for inland standard craft.

\$3,000,000 Bonds Sold.

The Kansas City Terminal Railway Co. has sold \$3,000,000 of its 4 per cent. bonds, which will mature in 1960, to Lee, Higginson & Co. of Boston, J. P. Morgan & Co. of New York and the Illinois Trust and Savings Bank of Chicago. This makes the total amount of bonds outstanding \$33,094,000, the total issue being \$50,000,000. Of the balance unissued there are \$7,739,000 reserved for construction, equipment, additions, improvements, etc. They are all secured by an agreement with the 12 railroad companies using the terminals.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Further details of highway undertakings and bond issues mentioned below are given under the headings Construction Department and New Securities, published elsewhere in this issue.]

Bonds Voted.

Abbeville, La.—Vermilion Parish police jury will issue \$72,500 bonds for road construction.

Cumberland, Md.—Allegany county will issue \$10,000 bonds to improve roads.

Melbourne, Fla.—City votes \$2000 street-improvement bonds.

New Braunfels, Tex.—Comal county will issue \$17,000 road and bridge bonds.

Norton, Va.—City will issue \$5000 bonds for street improvements.

Timpson, Tex.—City voted \$10,000 bonds to construct cement sidewalks.

Bonds to Be Voted.

Hertford, N. C.—City votes May 5 on \$50,000 bonds for paving and street improvements, etc.

Kaufman, Tex.—Two precincts of Kaufman county vote April 16 on \$300,000 bonds to construct roads.

Lexington, Tenn.—Henderson county votes August 6 on \$200,000 bonds to improve roads.

Parkersburg, W. Va.—Clay district of Wood county votes May 11 on \$40,000 bonds.

Somerset, Ky.—Pulaski county votes April 24 on \$300,000 bonds for road construction.

Taylorsville, N. C.—Alexander county votes June 9 on \$100,000 road bonds.

Contracts Awarded.

Baltimore, Md.—City awarded \$181,089.27 contracts for street improvements.

Baltimore, Md.—State awarded contracts for about 5 miles of road.

Chattanooga, Tenn.—Hamilton county awarded contract for road construction costing \$50,000.

Forest, Miss.—Scott county awarded \$5613.35 contract for road construction.

Houston, Tex.—City awarded \$17,100 paving contracts.

Jacksonville, Fla.—Duval county awarded contract for 5300 feet of highway.

Norfolk, Va.—City awarded \$41,184 contracts for street improvements.

Rockford, Ala.—Coosa county awarded contract for 4½ miles of road.

Seminola, Tex.—Gaines county awarded contract for 7 miles of road at \$225 per mile.

St. Louis, Mo.—City awarded \$231,153 paving contracts.

Tampa, Fla.—City awarded \$50,718 contracts for street paving, etc.

Tyler, Tex.—Tyler Good Roads District awarded \$33,534 contract for 25 miles of sand-clay roads.

Contracts to Be Awarded.

Annapolis, Md.—Anne Arundel county receives bids until April 21 to construct 1 mile of State-aid highway.

Baltimore, Md.—City receives bids until April 22 for 12,300 square yards sheet asphalt; 650 square yards vitrified block, 2350 square yards scoria block and 15,400 square yards wood black paving.

Cape Henry, Va.—Cape Henry syndicate will lay 1800 running feet of granolithic sidewalks.

Dallas, Tex.—City will expend \$7463.02 for street paving.

Danbury, N. C.—W. G. Moore and associates organized a company to construct 4 miles of road; estimated cost \$8000.

Florence, Ala.—City receives bids until May 4 to construct ½ mile of water-bound macadam street with concrete curb and gutter, etc.

Galveston, Tex.—City invites bids to extend paving on Broadway; 17 blocks.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

BIG EQUIPMENT ORDERS.

Southern Railway Awards Contracts for \$5,000,000 Worth—Other Purchases.

Following his statement of February 20 in regard to the company's financing, President Fairfax Harrison of the Southern Railway announces that with the proceeds of \$5,000,000 of equipment trust notes it has contracted for 75 locomotives, 54 all-steel passenger train cars and 4075 freight train cars, largely of steel construction.

The locomotives will include 45 of the heavy Mikado freight type, 15 of the Pacific passenger type, 13 six-wheel switchers and 2 eight-wheel switchers, which will be built on the most improved plans and will be similar to motive power of the same types now in service where traffic is heaviest. Baldwin Locomotive Works, Philadelphia, will build 25 Mikados, 5 Pacifics and the 2 eight-wheel switchers; American Locomotive Co., New York, will build 20 Mikados and 10 Pacifics; Lima Locomotive Corporation, Lima, O., will build the 13 six-wheel switchers.

The all-steel passenger equipment includes 35 coaches of the largest and latest type, electrically lighted, 4 dining-cars, 5 combination passenger and baggage cars, 5 mail and baggage cars and 5 baggage and express cars. American Car & Foundry Co. will build the 5 combination mail and baggage cars and the 5 baggage and express cars; Pressed Steel Car Co., Pittsburgh, will build the 35 coaches and 5 combination passenger and baggage cars; Barney & Smith Car Co., Dayton, O., will build the 4 dining-cars.

The 4075 freight train cars will include 3250 30-ton steel underframe ventilator box cars, 500 50-ton all-steel flat cars, 200 cabooses, 100 steel underframe stock cars and 25 steel underframe poultry cars. American Car & Foundry Co., St. Louis, will build 1450 of the box cars and the 500 flat cars; Lenoir Car Works, Lenoir City, Tenn., will build 1050 of the box cars, the 100 stock cars, the 25 poultry cars and the 200 cabooses; Mt. Vernon Car & Manufacturing Co., Mt. Vernon, Ill., will build 750 box cars.

This large equipment order shows the belief of Southern Railway Co. in the continued prosperity and growth of the territory it serves and its purpose to enlarge its facilities to keep pace with that growth. As soon as it can be delivered by the builders this equipment will be placed in service.

Delivery of the 25 freight locomotives purchased by the Missouri Pacific-Iron Mountain in January has just been completed, the last of the engines having been turned over to the company at St. Louis a few days ago. They were built by the Baldwin Locomotive Works of Philadelphia. They are of the Mikado type, and are among the largest and most powerful of that class in service on any railroad in the country. Each weighs 400,000 pounds when equipped for service, and measures 78 feet 4½ inches in length and 15 feet 5½ inches in height. The cylinders measure 27x30 inches, and the boilers have a steam pressure capacity of 170 pounds to the square inch. The weight on the main driving wheels is 209,000 pounds, and the engines have a tractive force of 50,160 pounds. They are equipped with electric headlights, electric cab lights and Schmidt superheaters. Eight of the engines have been assigned to service on the Joplin division, three to the Eastern division, eight to the Omaha division and six to the Southern Kansas division.

Nashville, Chattanooga & St. Louis Railway is reported to have ordered 2 postal cars, 1 baggage car, 2 dining-cars and 3 passenger cars, all of all-steel construction.

Maryland & Pennsylvania Railroad will purchase 2 Mikado type locomotives.

Louisville & Nashville Railroad is reported about to buy 10 locomotives.

Columbia (S. C.) Railway, Gas & Electric Co. will build 2 cars in its own shops.

Pennsylvania Railroad's recent order for rails is for 10,000 each from the Cambria Steel Co., Johnstown, Pa., and the Pennsylvania Steel Co., Steelton, Pa., these being preliminary awards for test purposes.

Western Maryland Railway has ordered 20 consolidation locomotives from the American Locomotive Co.

Southern Pacific Railway is getting prices on freight equipment, and will order, it is expected, 5100 cars.

Queen & Crescent Route is reported in the market for 5 locomotives.

New Orleans, Texas & Mexico Railway contemplates issuing \$1,200,000 of equipment trust notes. It is contemplated to buy 15 locomotives, 500 freight cars and some passenger and baggage cars.

Norfolk & Western Railway is requesting bids for the construction of 40 Mallet type locomotives.

UNITED RAILWAYS OF BALTIMORE.

Gross Earnings Last Year Over \$9,000,000—Increase Also in Net—Cost of Improvements, Etc.

In the annual report of the United Railways & Electric Co. of Baltimore, which has just been published, is revealed the interesting fact that for the first time its gross earnings have exceeded \$9,000,000 in a year. The report covers the calendar year 1913, which is also the fiscal year of the company. The exact figures are thus: Gross earnings \$9,046,492.09, increase as compared with the year 1912 \$475,002.72, or 5½ per cent.; operating expenses, including insurance, \$4,146,431.03, increase \$277,555.08, or 7½ per cent.; net earnings from operation \$4,900,061.06, increase \$197,447.64, or slightly more than 4 per cent.; total net income, \$4,907,006.12; balance after fixed charges, including taxes, rentals, etc., \$1,979,538.03. Rental account sinking fund, extinguishment of discount on securities, interest on income bonds and dividend on preferred stock also being deducted, there was left a surplus of \$1,321,587.54, out of which were paid dividends on the common stock, leaving \$530,225.54 carried to the credit of depreciation reserve. The percentage of operating expenses to gross earnings was 45.83 per cent., an increase of .69 of 1 per cent. If the depreciation charges were included in operating expenses the percentage would have been 51.70.

There was expended during the year for maintenance of way structures and equipment \$873,515.66, which, added to the depreciation reserve, makes \$1,403,741.20. During the last 14 years the company has expended for improvements approximately \$20,440,000. There is now no floating debt. Cash on hand December 31, 1913, was \$448,912.81, and there were also in its treasury \$2,715,000 par value of securities. Taxes and public charges paid during 1913 were \$1,065,168.39. Average earnings per car mile was 29.95 cents, an increase of .87 of a cent, and the cost of service, exclusive of depreciation, was 13.73 cents per car mile, an increase of .60 of a cent. The number of car miles run was 30,203,185, an increase of 730,648 miles. The total number of revenue passengers carried was 182,180,767, increase 9,947,426. There are 403 miles of single track in the system. The balance-sheet shows the total assets of the company to be \$82,849,901.17, of which \$70,541,459.24 represents the cost of road, equipment and real estate. The report is signed by President William A. House.

IMPORTANT CONSTRUCTION PLAN.

Chesapeake & Ohio May Build 93-Mile Road to Reach Hocking Valley Line.

The Chesapeake & Ohio Railway is considering the possibility of constructing a connecting railroad from its line at South Portsmouth, Ky., to a junction with the Hocking Valley Railroad at Columbus, O., 93 miles, and M. J. Caples, vice-president of the company, who is a civil engineer, has gone to Columbus to investigate conditions there and elsewhere with reference to the contemplated work. No decision has yet been reached to indicate whether it will be done or not.

According to a report from Richmond, where the headquarters of the company are situated, it appears highly probable that the line will be built, for it is said that Mr. Caples' absence from there will be prolonged and G. P. Johnson, general manager, will be head of the operating department of the system meanwhile. Mr. Caples was formerly vice-president and chief engineer of the Carolina, Clinchfield & Ohio Railroad, and after its completion and operation he went with the Chesapeake & Ohio, where he has been in charge of operation and construction. To build such a line as is contemplated would require two years' time.

Houston, Tex.—Harris county received bids until April 16 to grade and gravel 20,000 cubic yards of road; until April 15 to grade and gravel 4 miles.

Knoxville, Tenn.—City receives bids until April 27 to pave street with 11,724 square yards of standardized material.

Lake Arthur, La.—City opens bids May 5 to construct 14,000 square feet sidewalk and 1500 linear feet curb.

Lynchburg, Va.—Finance committee recommended \$50,000 appropriation to pave business section of Main street.

Mt. Sterling, Ky.—Government will build highway from Mt. Sterling to Sharpsburg; cost \$3400 per mile.

New Iberia, La.—City received bids until April 15 to construct 110,000 square feet concrete sidewalks and 33,000 linear feet concrete curb.

New Orleans, La.—State receives bids until April 20 to construct 44 miles gravel highway.

Orlando, Fla.—Orlando county will construct 296,710 square yards of brick paving.

Webster Groves, Mo.—City receives bids until April 27 to construct 15,000 square yards concrete paving.

Important Street Improvement Contracts.

Several important street improvement contracts have recently been obtained by the West Construction Co. of Chattanooga. They include the following: Constructing cement curb and gutter and paving roadways with asphalt concrete on concrete foundation, amounting to about \$100,000, at Moultrie, Ga.; same class of work, amounting to \$135,000, at Bartow, Fla.; granite curb, cement gutters and sheet asphalt paving, amounting to \$125,000, at Cordele, Ga.; \$50,000 worth of work for Hamilton county, Chattanooga.

Norfolk-Richmond Highway.

M. W. Joyner, president of the Business Men's Association of Suffolk, Va., writes to the MANUFACTURERS RECORD:

"There is a movement of the Automobile Association to build an up-to-date highway from Norfolk to Richmond, and I think that in the near future we will have a splendid road from Norfolk to Suffolk, and then have choice of two good roads from Suffolk to Richmond, one by way of Franklin and one by way of Smithfield."

For Ninety Miles of Road.

Sevier County Commissioners, Sevierville, Tenn., will open bids on May 1 for grading about 60 miles of road and macadamizing about 30 miles of road. They will have the plans and specifications on view in the engineers' office after April 25.

To Manufacture Locomotive Valve Gears.

Southern Locomotive Valve Gear Co., Knoxville, Tenn., mentioned last week as incorporated with \$300,000 capital stock, has organized to establish works for manufacturing the locomotive valve gear invented by William Sherman Brown, intending to market the device both in America and abroad. Its plant will include modern machine shops, steel casting foundries and auxiliary departments. Officers have been elected as follows: President, L. D. Tyson; vice-president and general manager, W. B. Murrian, superintendent of motive power for the Southern Railway at Knoxville; second vice-president, T. L. Cholman, foreman in the Southern shops at Knoxville; secretary, N. N. Boyden, master mechanic in the Southern shops at Coster, near Knoxville.

Engineers claim that the new valve gear centralizes steam in and out of the cylinder, increasing the hauling powers of a locomotive from 10 to 20 per cent. and saving oil, fuel and repairs. Mr. Brown, the inventor, has for many years been a locomotive engineer on the Southern Railway.

Aurora Cotton Mills, Burlington, N. C., will install electric motors to drive machine, finishing, dyeing and spinning departments, having awarded contract for the necessary equipment. This company has 17,952 ring spindles, 749 narrow looms, 48 cards, etc.

Atlantic & Carolina.

The Atlantic & Carolina Railroad Co., which is constructing a line 10 miles long from Warsaw to Kenansville, N. C., has completed the road from Warsaw, where it connects with the Atlantic Coast Line, to a point within two miles of Kenansville. The rest will be finished within six weeks. The rails have been bought, and are now on their way to the scene of work. A large force of men are grading the line under the direction of the Rowland Lumber Co., Bowden, N. C., of which A. R. Turnbull of Norfolk is president and general manager. This company financed and is constructing the line. It owns extensive tracts of timber land in Duplin, Wayne and Johnston counties.

This railroad traverses the center of the bright tobacco belt of Eastern North Carolina, and it will furnish transportation facilities to a section hitherto isolated, but one which will compare favorably with any other region in the State for truck raising and other agricultural purposes. Moreover, it will connect Kenansville, the county seat of Duplin county, with main lines of railroad. The new road is of standard gauge, and has rights of way in fee-simple 100 feet wide. The charter was obtained March 30. The capital stock authorized is \$50,000, with \$10,000 subscribed. Mr. Turnbull is the principal shareholder. Other incorporators are L. A. Beasley of Kenansville, W. J. Jones of Norfolk, T. A. Hefty of Bowden, R. D. Johnson of Warsaw and H. D. Williams of Kenansville.

Charleston Coal Terminals.

The Holston Corporation (Carolina, Clinchfield & Ohio Railway), Ward Crosby, chief engineer, Johnson City, Tenn., is planning to award contracts for constructing the coal terminals it proposes at Charleston, S. C. Its engineer, the J. W. Frazier Co. of Cleveland, O., will receive bids until April 29 for building the dock (850 feet long) and foundation; deck of concrete cap, supported on concrete piles; fill retained by concrete sheet piles; latter to vary from 65 to 75 feet in length; dock anchored to base of concrete tunnel, supported on wooden piles. As lately stated, Mr. Crosby is considering bids on 600,000 yards of dredging in this connection. It has been previously reported that the Holston plans include storage bins for 650,000 tons of coal, accompanied by loading and unloading machinery and other facilities.

W. A. Harriman on B. & O. Board.

R. S. Lovett, chairman of the executive committee of the Union Pacific Railroad, has retired from the board of directors of the Baltimore & Ohio Railroad, and the vacancy thus created has been filled by the election of W. A. Harriman, a son of the late E. H. Harriman. It is understood that the distribution of the Union Pacific's holding of Baltimore & Ohio stock to its shareholders is responsible for this change, and that the choice of Mr. Harriman as a director is owing to the large amount of B. & O. stock which he and others of his family receive in consequence of their large holdings of Union Pacific. Mr. Lovett's connection with the Erie Railroad as a director is also believed to have influenced his retirement from the B. & O., because the two roads compete.

New President for Georgia Central.

Wm. A. Winburn of Savannah has been elected president of the Central of Georgia Railway Co. to succeed Chas. H. Markham of Chicago, who is also president of the Illinois Central Railroad, which controls the Central of Georgia. It is stated that the purpose of the change is to place the management in a position of closer relationship with the people of the territory served by the line, as well as with its employees. Mr. Markham will continue to be associated with the company as chairman of the board of directors. Mr. Winburn, who entered the service of the company in 1892, has been vice-president since 1902.

Southern Pacific's Stock Increase.

The stockholders of the Southern Pacific Railroad have authorized the issue of \$20,000,000 more of capital stock in accordance with the financial plan outlined in

connection with the issue of \$55,000,000 of new 20-year 5 per cent. convertible bonds. This makes the outstanding capital stock \$292,672,405. The amount which may be issued is \$350,000,000. A resolution was adopted changing the principal place of business of the company from Beechmont to Anchorage, Ky., which latter is 16 miles out of Louisville. Beechmont is a suburb of that city.

Railroad Appointments.

The Southern Railway Co. announces the following appointments, effective April 15:

H. E. Hutchins, superintendent of passenger transportation, and W. M. Cowhig, superintendent of freight transportation, both at Washington, D. C. R. E. Simpson, general superintendent of the Northern District; O. B. Keister, superintendent of the Knoxville Division, Knoxville, Tenn. F. S. Collins, superintendent Mobile Division, Selma, Ala. M. O. Dunbar, trainmaster Charlotte Division, Greenville, S. C.

The position of superintendent of transportation is abolished.

F. L. Word has been appointed livestock agent, with office at Atlanta, Ga., for the Georgia Southern & Florida Railway and kindred lines.

Want Extension to Cape Sable.

A report from Miami, Florida, says that petitions are being circulated there and in Dade county asking the Florida East Coast Railway Co. to build a branch from Homestead or some other point to Cape Sable, the object being to furnish transportation facilities to a region which is said to be susceptible of great development for the cultivation of both fruits and vegetables. Some 35 or 40 miles of line would have to be built to provide the desired railroad. The railway company does not seem to have taken any steps in the matter, although some years ago, before the Key West extension was constructed, the officials for a while contemplated building an extension to Cape Sable.

S. H. West has been appointed general solicitor for the St. Louis Southwestern Railway Co. He was heretofore general attorney.

Tennessee Manufacturers' Association.

The Tennessee Manufacturers' Association, in session last week at Nashville, elected T. F. Bonner of Nashville president, M. E. Temple of Chattanooga, George L. Hardwick of Cleveland and S. B. Anderson of Memphis vice-presidents, Charles C. Gilbert of Memphis secretary, and Walter H. Clarke of Nashville treasurer. The board of governors will be: W. A. Rockwell, Harriman; T. R. Winfield, Memphis; J. E. Annis, Chattanooga; J. M. Rule, Knoxville; P. A. Gates, Memphis; J. T. Willingham, Memphis, and J. W. Rings, Johnson City. The executive committee consists of E. W. Foster, Nashville; F. C. Guthrie, Nashville; Milton H. Hunt, Memphis; C. D. Mitchell, Chattanooga; W. A. Rockwell, Harriman; J. B. Young, Bemis; T. R. Winfield, Memphis; J. E. Annis, Chattanooga; J. M. Rule, Knoxville; P. A. Gates, Memphis; J. W. Ring, Johnson City, and J. T. Willingham, Memphis.

Ashless Coal Co.

L. M. Buford and associates, Roanoke, Va., have leased 3200 acres of coal land one mile from Hazard, Ky., and will organize the Ashless Coal Co. (recently incorporated with \$150,000 capital stock) to develop the property. They will first develop 1800 acres of tract. Land is owned by W. J. Brown of Bristol, Va.-Tenn.; D. D. Hull and associates of Roanoke, Va., who have awarded contract for constructing a bridge across the river so as to connect the property with the Lexington & Eastern Railroad.

Wants 900,000 Bricks, Lime and Cemnet.

E. R. Brown, 209 W. 13th street, Richmond, Va., writes to the MANUFACTURERS RECORD that he is in the market for 750,000 common bricks and 150,000 stock bricks; also lime and cement in carload lots.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Swift Spinning Mills.

Swift Spinning Mills, Columbus, Ga., lately noted as contemplating to double output, has let contract to Frank A. Pierce of Columbus for the construction of a three-story 117x133-foot addition to present mill building, which will increase that structure to 300x133 feet, brick office building, two new sections of cotton warehouse and enlarging opening-room. About 13,000 spindles, with complementary machinery, will be added, increasing plant to a total of 28,000 spindles, this new machinery to be furnished by the Saco-Lowell Company of Lowell, Mass. High-grade 4s to 13s yarns are now being manufactured, and with the new machinery the company will manufacture 14s to 24s. Swift company has increased capital stock from \$180,000 to \$300,000.

Installing Electrical Machinery.

Installations of electrical machinery for Southern cotton factories have been ordered as follows: Six electric motors of 40 to 125 horse-power, two 15 K. V. A. transformers, switchboard, etc., for Cora Cotton Mills of Kings Mountain, N. C.; 12 25-horse-power four-frame electric motors, with auto switches and switchboard, for Proximity Manufacturing Co., Greensboro, N. C.; 200-horse-power induction electric motor for Patterson Manufacturing Co., Kannapolis, N. C. This equipment is being furnished by the General Electric Co., Shenectady, N. Y.

Durham Hosiery Mills.

Durham (N. C.) Hosiery Mills' contract, recently awarded to Fiske-Carter Construction Co. of Greenville, S. C., calls for erection of two-story 410x106-foot addition to main mill and two-story 155x100-foot warehouse, all of standard mill construction, to cost about \$100,000. On first floor the Durham company will install patented process for spinning waste yarns, and on second and third floors will install 7600 spindles. Other facts were lately noted.

Sterling Spinning Co.

Sterling Spinning Co., Louisville, Ky., lately noted incorporated with \$25,000 capital stock, etc., has organized with following officers: George Dunham, president; J. L. McElary, vice-president; M. W. Brack, secretary-treasurer. It has a one-story 255x63-foot brick and concrete building in which it is installing 1224 spindles, with direct electric drive, etc., costing about \$12,000. Daily capacity to be 1000 pounds of woolen yarns and 25 operatives to be employed.

Textile Notes.

W. E. Butler, Chase City, Va., will establish a hosiery knitting mill.

H. P. Butcher, 396 Broadway, New York, plans to establish an underwear knitting mill at Chase City, Va.

Hampton Cotton Mills Co., Edgefield, S. C., will install several spinning frames, having ordered this equipment of machinery from the Mason Machine Works of Taunton, Mass.

Tishomingo (Okla.) Development Co. is reported as interested in a plan for building a cotton mill to represent the investment of \$500,000. E. E. Pendergrass of Tishomingo is president.

The Riverdale Cotton Mills, West Point, Ga., awarded contract to Gresham Manufacturing Co., Griffin, Ga., to erect 10,000 clothroom addition recently mentioned, Park A. Dallis of Atlanta being the architect.

Issaqueena Mills, Central, S. C., will install 314 40-inch looms, replacing old narrow looms. This new equipment of weaving machinery has been ordered from the Mason Machine Works of Taunton, Mass.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Pratt City.—Birmingham, Ensley & Bessemer Ry., Geo. I. Brown, V.-P., Birmingham, will construct viaduct; steel and concrete; steel portion to be 275 ft. long; approaches 1500 ft. long; cost about \$40,000.

Ark., Batesville.—Independence county contemplates constructing free bridge across White River; State Highway Engr. Carter will be asked to prepare plans and submit estimate of cost.

Ark., Little Rock.—E. W. Jackson and C. C. Kavanaugh engaged Boller, Hodges & Baird, New York, to prepare plans and specifications for strengthening free bridge between Little Rock and Argenta preparatory to operation of railway contemplated in franchise granted Intercity Terminal Ry. Co.

Fla., Olga.—Lee County Comms. let contract at \$700 to Converse Bridge & Steel Co., Chattanooga, Tenn., to construct steel bridge. (Lately noted under Fort Myers, Fla.)

Fla., St. Petersburg.—Noel A. Mitchell, lately noted to erect bridge over Boca Ceiga from Jungle to Island, estimates cost at \$150,000; probably piling with cement covering; A. M. Stephan, Engr.

Ga., Vidalia.—Altamaha Bridge Co. has reports from engineers who have completed surveys on Altamaha River preparatory to constructing bridge; recommend location at Piney Bluff, where river can be bridged with 350 ft. steel work and 1000 ft. trestle work over swamp. (Lately noted.)

Ga., Montezuma.—Macon County Comms., F. J. Frederick, Chmn., will construct reinforced concrete bridge across Beaver Creek; 90 ft. long; roadway 18 ft.; bids until Apr. 28 at Courthouse, Oglethorpe, Ga.; plans and specifications at office of County Comms.; lately noted. (See Machinery Wanted.)

Ky., Hodgenville.—Fiscal Court of Larue County will construct double-width steel bridge to replace present structure across Nolyn Creek on N. Main St.; cost \$5000; contract let.

Ky., Pike County.—Tug River & Kentucky R. R. Co.'s lately-noted bridge across Tug River of Big Sandy River will be erected near Matewan, W. Va.; N. D. Maher, V.-P., in charge of operation, Norfolk & Western

Ry. Co., Roanoke, Va., advises: Cost about \$116,000; West Virginia side, two 70-ft. deck girder spans; channel span, 160-ft. truss; Kentucky side, three 80-ft. deck girder spans.

Md., Charlton.—Western Maryland Ry., H. R. Pratt, Ch. Engr., Baltimore, Md., will complete steel bridge across Potomac River; piers and abutments completed.

Miss., Meridian.—C. M. Card, building, plumbing and electrical inspector, prepared plans and specifications for viaduct across railroads to south side; reinforced concrete; 21-ft. driveway.

Mo., Jefferson City.—Jefferson City, Cole County Comms. and Osage County Comms., Linn, Mo., considering erection of bridge across Osage River at Hubers' Ferry, between two counties; 1200 ft. long and not less than 47 ft. above water line; cost about \$75,000.

Mo., Kansas City.—Board of Public Works will authorize construction of temporary 23d St. viaduct costing \$40,000 to connect from 23d and Brook Sts. with new high-line bridge to be built across Kaw River by Comms. Wyandotte County, Kans. (Details regarding proposed 23d St. viaduct previously noted.)

N. C., Danbury.—Stokes County Comms. let contract at \$9556 to R. R. King, Danbury, to construct 9 steel bridges in Danbury and Sauratown townships. (Lately noted.)

N. C., Raleigh.—Wake and Durham County Road Suprs. agreed to construct steel bridge across Neuse River; 100-ft. span; two 20-ft. abutments; 30 ft. above river; cost \$2000.

Okla., Salina.—City voted \$20,000 bonds to construct bridge across Grand River. Address The Mayor. (Lately noted.)

Okla., Wagoner.—Wagoner county postponed date opening bids to erect 3 bridges; 100 ft. long; 16-ft. roadway; cost \$3550 each; plans and specifications at offices County Clerk and H. H. Hellen, Engr., Wagoner. (Lately noted.)

S. C., Beaufort.—Beaufort County Comms. issued \$80,000 bonds to construct concrete bridge from Beaufort across Beaufort River to Ladies and St. Helena islands; length, 1600 ft.; J. B. Walker, Chmn., Bridge Com. (Bond issue lately noted voted.)

Tenn., Chattanooga.—Wauhatchie Ry. Extension Co., Chas. A. Lyerly, Prest., will construct iron or concrete bridge.

Tenn., Chattanooga.—Southern Ry., B. Herman, Ch. Engr., Washington, D. C., and Nashville, Chattanooga & St. Louis Ry., H. McDonald, Ch. Engr., Nashville, Tenn., let contract to Chickamauga Construction & Quarry Co. to construct viaduct over East End viaduct.

Tenn., Decatur.—Quarterly Court of Meigs county will construct iron bridge near Georgetown. Address County Comms.

Tenn., Harriman.—Morgan-Fentress Ry. Co., F. H. Enwright, Gen. Mgr., will construct 2 bridges.

Tenn., Kingsport.—Sullivan County Commissioners, Blountville, Tenn., and Hawkins County Commissioners, Rogersville, Tenn., are considering construction of bridge at Kingsport.

Tenn., Lebanon.—Wilson County Bridge Com. let contract to Luton Bridge Co., Nashville, to construct following concrete bridges: At \$2494 for bridge over Kaney Creek at Walnut Grove; \$1553 for bridge over Jones Creek at Watertown; \$1553 for bridge at Martha; \$1167 for bridge at Commerce; \$1200 for bridge over Barton's Creek on Franklin Rd.

Tenn., Loudon.—Loudon County Court appropriated \$3500 to construct concrete bridge over Pond Creek near Galyon's Gap and over Fork Creek near Burton's Mill.

Tenn., Rogersville.—Hawkins County Commissioners, Rogersville, and Hamblen County Commissioners, Morristown, Tenn., are considering construction of bridge in lower portion of county.

Tex., Columbia.—Brazoria County Commissioners, Angleton, Tex., will repair pier of steel highway bridge over Brazos River; bids until May 11; T. C. Tolman Engineering Co., Engr., Houston, Tex.; J. W. Munson, County Judge. (See Machinery, etc., Wanted.)

Tex., Dallas.—J. F. Witt, County Engr., is preparing plans and surveys for 2 bridges to be built across Trinity River; one to cost \$30,000; 2 to cost \$8000 each. (Bond issue of \$75,000 previously noted voted for bridge building and paving.)

Tex., Houston.—City will construct Preston Ave. bridge; 150x60 ft.; reinforced concrete; cost \$45,000; bids opened Apr. 16; E. E. Sands, City Engr. (Lately noted.)

Tex., Houston.—City's bridge across Buffalo Bayou (contract lately noted let to James Stewart & Co., Houston) will cost about \$150,000; cover about 45,000 sq. ft.; beam and girder construction of reinforced concrete; clear span of 54 ft. over bayou at intersection of two streets to be triangular, the center holding monument of Gen. Sam Houston; E. E. Sands, City Engr.

Tex., New Braunfels.—Comal county will issue \$17,000 bridge and road bonds; further particulars not available. Adolf Stein, County Judge.

Tex., Oakville.—Live Oak county will construct highway bridge across Nueces River near George West; bids until Apr. 13; Bartlett & Ranney, Inc., Consult. Engr., 510 Gibbs Bldg., San Antonio, Tex.

Tex., San Angelo.—Tom Green county voted \$15,000 bonds to complete approaches to viaduct across North Concho River. Address County Comms.

Tex., Sealy.—Citizens of Sealy and adjacent communities contemplate construction of steel bridge across Brazos River. Address Leonard Tillotson, Sealy National Bank. (See Machinery Wanted.)

Va., Norfolk.—Company organized with Paul Garrett, Prest.; Robt. Tait and Lester Wilson, V.-Ps.; W. B. Dougherty, Secy.-Treas.; to construct Norfolk-Berkley bridge; petitioned city for franchise.

W. Va., Matewan.—Tug River & Kentucky R. R. Co. will build bridge across Tug Fork of Big Sandy River near Matewan. (See Ky., Pike County.)

W. Va., Union.—Monroe County Comms. open bids Apr. 22 to construct bridge over Second Creek at Gap Mills; probably concrete construction; S. C. Wallace and C. P. Lewis, committee.

CANNING AND PACKING PLANTS

Ark., Argenta.—Argenta Canning Co. organized with \$10,000 capital stock; to erect proposed plant to can sweet potatoes, etc.; bids received.

Ark., Harrison.—Harrison Cannery will erect 2-story 48x80-ft. and 1-story 46x60-ft.

buildings; install machinery; daily capacity, 15,000 to 20,000 cans tomatoes, peaches, apples, etc.

Ark., Holly Springs.—Fresco Valley Canning Co., capital stock \$5000, incptd.; D. R. Swaty, Prest.; W. A. Taylor, V.-P.; J. A. Hawks, Secy.; G. L. Sorrells, Treas.

Fla., Live Oak.—Geo. H. Davis, Mgr. Middle Florida Grocery Co., will install machinery for canning tomatoes.

Ky., Louisville.—Omaha Packing Co. increased capital stock from \$10,000 to \$500,000.

Md., Ridgely.—T. L. Day, Swing & Co. let contract to Lane & Lang to erect iron building with cement floor for lately noted tomato canning plant.

Tenn., Cleveland.—Bradley Packing & Cold Storage Co., capital stock \$20,000, incptd. by G. T. Hall, W. F. McIntire, L. D. Campbell and others.

Tex., Austin.—Chamber of Commerce negotiating with Indiana parties relative to establishment of plant to can tomatoes, etc.

Tex., Palestine.—Young Men's Business League interested in establishment sweet-potato storage plant; cost about \$7000.

Tex., Sugarland.—Home Packing Co. will erect packing-house; 3 stories; also, ice and cold-storage plant; C. W. R. Thelen, Supt. of construction.

W. Va., Wheeling.—Paul O. Reymann Co. organized with Paul Reymann Prest.; convert Reymann Brewing Co.'s plant into packing plant; 146x128 ft.; concrete; rendering tank, filling and cutting rooms, and smoke-house; C. H. A. Wannevetsch & Co., Archts., Buffalo, N. Y.

CLAYWORKING PLANTS

Ala., Gadsden.—Bricks.—Capt. F. M. Eslick and associates will establish brick plant.

Tenn., Bristol.—Bricks.—Bristol Brick Co., capital \$25,000, incptd. by Jos. A. Caldwell, S. M. Mitchell, J. H. Fleming and others.

Tex., Dallas.—Decorative Tile, etc.—Edward Wulff and Simon Lack, San Antonio, Tex., will establish plant to mfr. interior-finish and decorative tile.

Tex., Houston.—Alois Wensle and Franz Eunselve (registered at Macatee Hotel), representing German corporation, are reported as contemplating erection of plant to mfr. face bricks of sand and lime and pressed clay bricks.

Tex., Port Arthur.—Bricks.—R. L. Dennison, Dallas, Tex., is reported to build brick plant; daily capacity 40,000 bricks.

Tex., Port Arthur.—Bricks.—R. L. Dennison of Dallas, Tex., is interested in erection of brick plant; daily capacity, 40,000 bricks.

COAL MINES AND COKE OVENS

Ky., Hazard.—Ashless Coal Corp., L. N. Buford, Prest., Roanoke, Va., leased coal tract in Perry county from Hazard Coal Land Co., Wm. J. Brown, Prest., Bristol, Va.-Tenn.; install electrically-equipped plant, 1000 tons daily capacity; this tract comprises about one-half of holdings (3200 acres) of Hazard Coal Land Co., which company expects soon to lease other half, the lessee to install similar plant. (Under Va., Roanoke, Ashless Coal Corp. lately noted incptd., capital stock \$150,000.)

Ky., Indian Bottom.—J. H. Green and others purchased several thousand acres coal land on Line Fork Creek; will develop; plan installing mining plant.

Ky., Mater.—Elkhorn Coal Co. organized; J. Henry Hall, Prest. and Gen. Mgr.; \$30,000 capital stock; leased Potter coal tract and will develop; initial daily capacity, 700 to 800 tons.

Ky., Pikeville.—T. N. Huffman Coal Co., capital \$15,000, incptd. by T. N. Huffman, Hester A. Huffman and Mary C. Leslie.

W. Va., Kingwood.—Kingwood Collieries Co., 812 Harrison Bldg., Columbus, O., is having preliminary plans prepared by Glendinning & Flinderburg, Kingwood, for tippie and coal-mine improvement; cost \$15,000.

CONCRETE AND CEMENT PLANTS

Ky., Lexington.—Cement Products.—Bell Construction Co., H. K. Bell, Prest., Box 376, organized to mfr. cement products, etc. (See Miscellaneous Enterprises.)

Miss., Greenville.—Cement Tile.—Delta Cement Tile Co., capital \$50,000, incptd. by LeRoy Percy, Morris Rosenstock, J. H. Crouch and others.

Miss., Tishomingo—Concrete Ties.—Tishomingo Concrete Tie Co., capital stock \$200,000, incptd. by A. E. Robinson, J. T. White, M. W. Cozart and others; mfrs. concrete ties and other construction material.

Mo., Kansas City—Portland Cement.—Iola Portland Cement Co., Iola, Kans., H. Struckman, Pres., Commerce Bldg., Kansas City, closed options on site and is preparing plans and specifications to construct plant; reported to have daily capacity 2000 barrels Portland cement and cost about \$1,000,000. (Lately noted.)

Okl., Wagoner—Silos.—Oklahoma Cement Silo Co. (T. C. Harrill and H. B. Raines) contemplates erecting silo factory.

COTTON COMPRESSES AND GINS

La., Church Point.—People's Ginning Co. voted to build another plant.

Miss., Sunflower.—Sunflower Gin Co., capital \$30,000, incptd. by D. M. Craig, L. E. Blalorne and others.

N. C., Franklinton.—Franklinton Union Ginning Co., capital stock \$125,000, incptd. by W. H. Harris of Wake Forest, N. C.; A. B. Webster, H. D. Mitchell, J. H. Wilder and others of Franklinton.

Okl., Kefauver.—Farmers' Gin Co. (lately noted) incptd., capital stock \$10,000 will conduct plant of 100 bales daily capacity; J. W. Bagwell, Pres.; Geo. B. Bagwell, V.-P.; J. J. Nixon, Secy.-Treas.

S. C., Charleston.—American High Density Compress Co., capital stock \$500, incorporated by Walter B. Wilbur, E. P. Guernard and J. J. Murray.

Tex., Creechville.—Creechville Farmers' Gin Co., capital stock \$10,000, incptd. by A. Krutick, Fred Petrash and F. W. Peter.

Tex., India, R. F. D. from Ferris.—India Gin Co. organized by M. A. Carpenter and others to build cotton gin.

Tex., Rockwell.—People's Gin Co. will build cotton gin; T. B. Ridgwell interested.

COTTONSEED-OIL MILLS

Ga., Augusta.—Swift & Co., Chicago, Ill., will erect cottonseed-oil mill, plant to mfr. cotton-oil by-products, and fertilizer plant. (See Fertilizer Factories.)

N. C., Mooresboro.—Mooresboro Cotton Oil Co. is considering future doubling capacity of plant; probably after one or two years; no improvements planned for this season.

Okl., Tishomingo.—C. T. Wright, Celina, Tex., and Geo. I. Baldwin (president Western Engineering Co., Dallas, Tex.) were lately incorrectly noted as organizers of cold press oil mill; local farmers are the interested parties. (Previously mentioned.)

Tex., Ganado.—J. F. Kallaga will erect 4-stand gin with floor space to double capacity.

Tex., Kennard.—Kennard Cotton Oil & Mfg. Co., capital stock \$20,000, organized; J. J. Cooper, Pres.; Claibe Latimer, Secy.; establish plant to mfr. cottonseed products; machinery purchased.

Tex., Taylor.—Planters' Oil Co., P. S. Grogan, Pres., Houston, Tex., is erecting lately noted oil mill; brick and mill construction; work by owner; machinery purchased.

DRAINAGE SYSTEMS

Fla., Vero.—Indian River Farms Co., J. H. Hass, Pres., 609 Putnam Bldg., Davenport, Iowa, advises is at present developing 44,213 acres; cost of canals, lateral ditches and sub-lateral ditches to be about \$600,000; contractor, W. H. Crane Co., Council Bluffs, Iowa, sublet portion of work to Johnson & Johnson, Miami, Fla.; previously noted. (See Land Developments.)

Ga., Savannah.—Chatham County Comms. plans to drain Shaw's Swamp in spring; construct 2 trunks across Dean Forest Rd., cost about \$1000; cost of flood gate about \$18,000.

Miss., Yazoo City.—Yazoo County Supvs. ordered formation Aichafalaya Drainage Dist., comprising about 50,000 acres; estimated cost \$50,000; J. H. Redd, L. C. Hutchins and W. E. Campbell appointed Comms.

N. C., Concord.—Cabarrus County Drainage Dist. No. 2 will construct drainage canal or ditch in bottoms of Irish Buffalo Creek; 14 ft. wide, 7 ft. deep, 13.2 mi. long; remove 261,411 cu. yds. earth and 341 cu. yds. rock excavation; bids until Apr. 27; lately noted. (See Machinery Wanted.)

N. C., Hertford.—City will vote May 5 on \$50,000 bonds for drainage, water-works paving, street improvements and sewers. Address The Mayor.

S. C., Greenwood.—Turkey Creek Drainage Dist. of Greenwood county organized to re-

claim overflowed creek bottom lands; construct canal 8 mi. long; preliminary examination and report made by F. G. Eason, U. S. Drainage Engr., Charleston, S. C.

S. C., Latta.—Gum Swamp Drainage Dist. of Dillon County organized; comprises about 20,000 acres; contemplate constructing 4 mi. canal; preliminary examination and report by H. G. Hawley, Asst. Drainage Engr., U. S. Dept. Agriculture, Charleston, S. C.; E. B. Berry, Latta, interested.

S. C., Orangeburg.—Pettus Branch Drainage Dist. will reclaim 2000 acres of land in Orangeburg county; G. H. Harvey, Holly Hill, S. C., interested.

S. C., Orangeburg.—Rum Neck Drainage Dist. will reclaim 2500 acres of land in Orangeburg county; G. H. Harvey, Holly Hill, S. C., is interested.

S. C., Sumter.—Pinewood Drainage Dist. No. 1 comprises about 3000 acres in Sumter and Clarendon counties; will construct several mi. of canals; F. G. Eason, U. S. Drainage Engr., Charleston, S. C., made report.

S. C., Winnsboro.—Waterree Creek Drainage Dist. will construct about 6 mi. canal to reclaim overflowed creek bottom lands; preliminary examination and report made by F. G. Eason, U. S. Drainage Engr., Charleston, S. C.

Tenn., Henderson.—Forked Deer Drainage No. 1 of Chester county let contract to D. W. Robins, Tupelo, Miss., at \$48,000 to construct drainage system; about 600,000 cu. yds.; main ditch and laterals, 25 mi.; main ditch up Forked Deer River and laterals include Tar Creek, Horse Creek, Jack's Creek, Sugar Creek, Clark's Creek, Jones Creek, Finger Creek and Turkey Creek. J. F. O'Neal, Secy.-Treas. director of district. (Call for bids and further facts lately noted.)

Tex., Fresno.—Port Bend County Drainage Dist. No. 2 organized; proposes to issue \$65,000 bonds to drain 25,000 acres comprised in district. Address County Comms., Richmond, Tex.

ELECTRIC PLANTS

Ala., Gadsden.—City adopted report of joint committee of Chamber of Commerce and City Council recommending construction of electric-light and power plant; will now secure details as to cost and type of plant. Chas. L. Marsh, City Engr. (Lately noted.)

Ark., Harrison.—Geo. D. Locke, Rogers, Ark., and others purchased electric-light plant from Harrison Electric Light & Ice Co., changed name to Harrison Gas & Electric Co. and increased capital to \$100,000; will erect plant at new location, after which present plant will be abandoned; R. M. Fellows, former owner of light and ice plants, retains ice plant and will expend \$25,000 on new equipment, including cold-storage plant for fruit.

Ark., Horatio.—DeQueen Ice & Light Co. is reported to have secured municipal franchise to furnish electric lighting.

Fla., Tallahassee.—City will enlarge electric-light plant; W. M. McIntosh, Board Public Works.

Ga., Fitzgerald.—Water, Light and Bond Com. let contract for additional machinery at electric-light plant; double capacity; install 400 H. P. engine, directed connected to 312 K. W. motor; cost \$10,000.

Ky., Burgin.—W. H. DeBaun, Perryville, Ky., plans to build electric light and ice plant.

Ky., Louisville.—Louisville Gas & Electric Co. progressing with enlargement Waterside steam turbine power station, directed by engineering department of H. M. Bylesby & Co., Insurance Exchange Bldg., Chicago; excavating and driving pile for steel-concrete 27x100-ft. addition to house four 500 H. P. Babcock & Wilcox water-tube boilers, with superstructure and chain grates, ash and coal conveyors and overhead coal bunkers with capacity of 85 tons per boiler; arranging to install additional 5000 K. W. horizontal turbo-generating unit, complete with surface condenser, separate exciter, etc. (Previously noted as practically arranged for materials and machinery.)

Ky., Maysville.—City is considering construction of electric-light plant; cost \$22,000. Address The Mayor.

Ky., Princeton.—City Council is reported as considering installation of electric-light plant; R. W. Lisanby, Mayor.

Ky., Scottsville.—Scottsville Electric Light Co., capital stock \$500, incptd. by J. D. Read, J. B. Dodson and H. L. Hendrick.

Ky., Shepherdsville.—Shepherdsville Electric-Light, Water & Cold-Storage Co. is being organized with \$10,000 capital stock and S. W. Bates Pres.; will acquire light plant and probably enlarge; also purchase

5-ton ice machine and cold-storage equipment.

La., Melville.—City will vote May 2 on \$15,000 bonds for electric-light plant. Address The Mayor.

Miss., Belzona.—Water and Light Dept. contemplates installing duplicate generating unit in electric-light plant, also to purchase 100 H. P. boiler; 100 H. P. engine; 100 K. V. A. 3-phase 2200-110-volt generator directly connected to engine; switchboard for above unit; 100 25-ft., 25 30-ft. and 10 45-ft. poles, and 10 series incandescent center-span street lamps; J. J. Sisloff, Mgr.

Miss., Waynesboro.—Waynesboro Electrical Co., capital stock, \$30,000, incptd. by C. C. Green, O. R. Green and J. A. Leggett.

N. C., Canton.—City plans to secure installation of electric-light system; not less than 10 arc lights, 700 C. P., and 25 lights of 100 C. P. each; bids until Apr. 27 for 5 years from May 1; T. F. Reynolds, Mayor. (See Machinery Wanted.)

N. C., Elkin.—Mason Lillard and others contemplates installation of lighting system or taking over and remodeling old system. (See Water-power Developments.)

S. C., Columbia.—Columbia Railway, Gas & Electric Co. will build addition to substation at Washington and Assembly Sts.; brick; cost \$2000; install switchboards and transformers.

S. C., Ehrhardt.—Town let contract to establish electric-light plant; install oil engine. Address Town Clerk.

Tenn., Dickson.—Electric Light Comms. (E. S. Payne and others) arranged for improvements and extensions to electric-light system; bonds lately reported voted.)

Tenn., Elkmont.—Appalachian Club, Knoxville, Tenn., will enlarge electric-light plant, water-works and sewer system. (See Miscellaneous Structures.)

Tenn., Johnson City.—John W. Hunter is promoting construction of electric-light system; organizing company and will petition for franchise.

Tenn., Nashville.—Nashville Railway & Light Co. will build concrete smokestack at Cumberland River power plant; height 150 ft.; inside diam. 12 ft. This replaces 2 steel stacks 200 ft. high and 12 ft. in diam.

Tenn., Paris.—City is considering plans for rebuilding electric-light plant, changing system from 3-wire direct current to 60 cycles, alternating current; M. W. Younk, Mgr.

Tenn., Springfield.—City contemplates erecting addition to power-house and installing 200 K. W. generating unit with condenser; also purchasing engine and generator for above unit, exciter, circuit feeder, panels and 2 pumps for water-works; G. B. Shawver, Supt.

Tex., Aransas Pass.—City, Jesse J. Todd, Mayor, asks bids until May 5 for requirements for construction of previously described electric-light and water-works systems; M. Griffin O'Neil & Sons, Engrs., 1505 Praetorian Bldg., Dallas, Tex. (See Machinery Wanted.)

Tex., Brownwood.—Texas Power & Light Co. will install street-lighting system to consist of 162 tungsten lamps of 100 candle-power, maintained by overhead wires; cost \$15,000; let contract for material. (Lately noted.)

Tex., Dallas.—North Texas Utilities Co., capital stock \$500,000, incptd. by Hiram Grosman, W. C. Woodlief and W. T. Heninger.

Tex., Dayton.—J. B. Sterling and others will build electric-light plant; plans prepared; Mr. Sterling to be Gen. Mgr. and Supt.

Tex., Hico.—Hico Electric Light & Power Co., H. Gleason, Secy., contemplates constructing 22 mi. transmission lines; also installing additional turbine and boiler and tub transformer for incandescent lamps. (Lately reported to have secured franchise.)

Tex., Sherman.—Texas Light & Power Co. will expend \$18,000 in improvements to include remodeling of engine-room, raising wires and placing new poles.

Tex., Terrell.—Terrell Electric Light Co. (lately noted burned) has reconstructed and restored service.

Va., Bridgewater.—North River Electric Co., G. Richard Berlin, Pres., is reported as contemplating improvements to plant.

Va., Fredericksburg.—Rappahannock Electric Light & Power Co., S. C. Foster, Supt., contemplates erecting addition to Hazel Hill power plant, for which equipment has been purchased; also contemplates purchasing 2 switchboard panels, exciter, mechanical stoker and condenser, poles, lightning arresters and 5000 lbs. wire.

Va., Lynchburg.—City is considering construction of electric-light plant; Harry L. Shaner, City Engr.

W. Va., Newell.—Newell Water & Power Co. will erect addition to power plant and install low-pressure steam turbine. (See Water-works.)

FERTILIZER FACTORIES

Ga., Augusta.—Swift & Co., Chicago, Ill., will erect fertilizer factory, cotton-oil mill and plant to manufacture cotton-oil by-products on site of about 7 acres; electrically equipped; install 500 H. P. plant; cost about \$300,000.

N. C., Newbern.—Newbern Cotton Oil & Fertilizer Mills, C. L. Ives, Gen. Mgr., contemplates additions to fertilizer factory; extent undecided.

FLOUR, FEED AND MEAL MILLS

Ky., Louisville.—N. J. Elsendarth Milling Co. increased capital from \$10,000 to \$20,000.

Okl., Oklahoma City.—Acme Milling Co., capital \$100,000, incptd. by Geo. C. Sohlberg, J. T. McClelland and D. Lindbloom.

Tex., Denison.—Denison Mill & Grain Co., Geo. W. Armstrong, Pres., will install 40-bbl. mill. (Lately noted to install electric machinery and mfr. flour.)

Tex., Fort Worth.—Burrus Mill & Elevator Co. let contract to MacDonald Engineering Co., Chicago, to erect reinforced concrete grain elevator with capacity 150,000 bus.; divided into 10 separate bins ranging in capacity from 3000 to 20,000 bus.; 85 ft. deep; also equip with conveying machinery. (Lately noted.)

Tex., Galveston.—Texas Star Flour Mills, capital stock \$500,000, incptd. by Morris Lasker, Edw. Lasker and Frank J. Becker; succeeds M. Lasker & Sons.

W. Va., Parkersburg.—Peerless Milling Co. will enlarge capacity; install additional machinery; let contract; daily capacity 250 bbls. flour.

FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Pipe.—United States Cast Iron Pipe & Foundry Co. will build additional pit.

Ky., Pikeville.—Machinery.—Call Machine & Supply Co., capital \$10,000, incptd. by J. W. Call, James R. Call and William P. Call, Jr.

Mo., St. Joseph.—Structural Steel, etc.—St. Joseph Structural Steel Co., T. W. Dodd, Mgr., 4th and Franklin Sts., organized to fabricate structural steel for mill buildings; purchased plant already in operation. (Lately noted.)

Mo., St. Louis.—Dry Plate Cutting Machine.—United States Dry Plate Cutting Machine Co., capital stock \$10,000, incptd. by Arnold L. Milneitz, F. Ernest Cramer, Edw. C. Clostermeyer and others.

Tenn., Knoxville.—Locomotive Valve Gears. Southern Locomotive Valve Gear Co. organized; L. D. Tyson, Pres.; W. B. Murrian, 1st V.-P.-Gen. Mgr.; E. L. Cholman, 2d V.-P.; N. N. Boyden, Secy.; plans to establish works for manufacturing locomotive valve gear invented by Wm. Sherman Brown; plant will include modern machine shops, steel casting foundries and auxiliary departments; proposes marketing product in America and abroad. (Lately noted incptd. with \$300,000 capital stock, etc.)

Tex., Dallas.—Steel Tanks.—O. K. Harry Steel Works, capital stock \$80,000, incptd. by O. K. Harry, J. M. Harry and W. R. Clark.

Va., Richmond.—Ad-Display Machines.—Ad-Display Machine Corp., capital stock \$30,000, incptd.; Geo. H. Hutchings, Pres., Richmond; S. B. Austell, Secy., 927-929 Linden Ave., Baltimore, Md.

Va., Roanoke.—Safety Rail Joints.—Ballou Safety Rail Joint Co., capitalization \$250,000, incptd. by C. V. Ballou, Harris Hogue, Ashby Williams and others; plans manufacture of safety rail joints; will soon organize.

W. Va., Fairmont.—Blacksmith Shop.—Wm. Morris will build blacksmith shop and carriage factory.

GAS AND OIL ENTERPRISES

Ala., Eufaula.—Gas Plant.—City contemplates expending \$3000 to improve gas plant. Address The Mayor.

Ark., Bridge Junction (not a P. O.).—Standard Oil Co. of Louisiana, Baton Rouge, La., is reported to build reservoir at Bridge Junction, across Mississippi River from Memphis, Tenn.; oil to be brought to Memphis from Baton Rouge on tank barges and piped from Hopefield Point, 2 mi., to storage tanks through 6-in. pipe lines; at Bridge Junction oil is to be loaded on cars and distributed to 3 States.

Ky., Cannel City.—Sam Spencer Drilling Co., capital \$20,000, inceptd. by S. R. Collier, Sam Spencer and L. Darrow.

Ky., Paintsville.—Edna Oil & Gas Co. increased capital from \$1000 to \$10,000.

La., Shreveport.—Alabama Oil Co., capital stock \$100,000, inceptd. to develop oil wells in Caddo parish; W. F. Aldrich, Pres.; J. M. Eastham, V.-P.; T. H. Joy, Secy. Treas., all of Birmingham, Ala.

Mo., St. Louis.—Distributing Plant.—Standard Oil Co. (main office, 26 Broadway, New York), local office, Syndicate Trust Bldg., let contract Murch Bros. Construction Co. of St. Louis at about \$55,000 to erect 4 buildings; one to be warehouse; 2 stories and basement; 235x66 ft.; reinforced concrete and brick; loading platforms; steel window sills; concrete floors; estimated cost \$40,000; other buildings to be 1-story brick machine shop and garage, 50x122 ft.; mill construction; cost about \$6000; 1-story storage room; mill construction; 32x140 ft.; cost \$3000; 2-story barn; cost \$6000.

N. C., Rocky Mount.—Gas Plant.—City, L. F. Tillery, Mayor, asks bids until May 5 on previously-noted gaspipe lines; 10 mi. 4 to 10-in. cast-iron pipe; Gilbert C. White, Charlotte, N. C., Engr. (See Road and Street Work and Machinery Wanted.)

N. C., Wilson.—Gas Plant.—City granted gas franchise to Southern Gas Improvement Co., W. A. Lucas, representative; will install \$100,000 plant. (Lately noted.)

Okla., Ada.—Sandy Oil Co., capital \$20,000, inceptd. by W. H. Ebey, R. W. Simpson and W. W. Sledge.

Okla., Altus.—Spears Oil & Gas Co., capital stock \$25,000, inceptd. by C. G. Spears, A. C. Williams and J. L. Hughes.

Okla., Ardmore.—Glenwood Oil & Gas Co., capital \$25,000, inceptd. by G. A. Ramsey, Harold Wallace and F. J. Ramsey.

Okla., Ardmore.—Kinney Oil Co., capital \$15,000, inceptd. by Lon Polk and H. J. Folk of Sulphur, Okla., and J. J. Kinney of Holdenville, Okla.

Okla., Ardmore.—Gainesmore Oil Co., capital stock \$17,000, inceptd. by M. Kahn of Gainesville, Tex.; Julius Kahn and Joseph Weiss of Ardmore.

Okla., Ardmore.—Europa Oil & Gas Co., capital stock \$30,000, inceptd. by G. M. Weems, Oklahoma City; W. T. Freeman, Ardmore, and A. M. Coates of Oklahoma City.

Okla., Cushing.—Refinery.—Chanute Refinery Co. of Chanute, Kans. is reported to have purchased site on which to build refinery.

Okla., Durant.—A. T. Woods, Coffeyville, Kans. (representing Kansas company) petitioned city for franchise to pipe natural gas into Durant for commercial and manufacturing use.

Okla., Guthrie.—Milton Oil, Gas & Development Co., capital \$25,000, inceptd. by H. H. Reynolds, E. S. Lowther and H. M. Adams.

Okla., Guthrie.—Triumph Petroleum Co., capital stock \$25,000, inceptd. by George M. King, Frank B. Burford and John H. Burford.

Okla., Hugo.—Eastern Oklahoma Development Co., capital \$1000, inceptd. by Claude R. Spriggs of Hugo, G. C. Cyphers and T. M. Watson of Idabel, Okla.

Okla., Lawton.—Sullins Oil & Gas Co., capital stock \$24,000, inceptd. by R. A. Sullins, W. D. Turner and M. A. Wert.

Okla., Muskogee.—Mars Oil Co., capital \$3200, inceptd. by W. T. Hutchins and E. A. Neher of Muskogee and J. Harvey Randall of Bacone, Okla.

Okla., Muskogee.—Vindicator Oil Co., capital stock \$25,000, inceptd. by Solomon Hamburger, Isaac Hamburger of St. Louis, Mo., and W. D. Egloff of Muskogee.

Okla., Oklahoma City.—Badger Petroleum Co., capital \$20,000, inceptd. by R. L. Corley, F. R. Ford and F. B. Corley.

Okla., Oklahoma City.—Woodpick Oil Co., capital \$10,000, inceptd. by T. J. Wood, C. Pickering and D. W. Collins.

Okla., Oklahoma City.—Tri-City Petroleum Co., capital stock \$500,000, inceptd. by W. G. Welmer, J. H. Gordon of McAlester, Okla., and James Brazell of Oklahoma City.

Okla., Okmulgee.—Hadley Oil Co., capital stock \$12,000, inceptd. by J. N. Alsop, W. Lusk Morris and Joe S. Eaton.

Okla., Sapulpa.—A. J. Shirk Oil & Gas Co., capital stock \$36,000, inceptd. by A. J. Shirk and H. A. Dougherty, Kansas City, Mo., and H. H. Harbison.

Okla., Sulphur.—Physicians' Oil & Gas Co., capital stock \$30,000, inceptd. by H. C. Bailey, J. E. Bailey and D. M. Wyrick.

Okla., Skiatook.—Washington Oil Co., capital stock \$10,000, inceptd. by E. M. Corah,

Vinita; J. H. Craig of Skiatook and P. W. Wilkins, St. Louis, Mo.

Okla., Tecumseh.—Tecumseh-Homer Oil & Gas Co., capital \$10,000, inceptd. by R. Z. Youngblood, J. C. Curry and W. S. McCaskill.

Okla., Sapulpa.—Bee Creek Oil & Gas Co., capital \$12,000, inceptd. by Dr. H. S. Garland of Sapulpa, J. G. Moto and R. R. McCurdy of Kiefer, Okla.

Okla., Stillwater.—Favilla Oil & Gas Co., capital \$25,000, inceptd. by M. B. Hedges, Geo. Dollinger and J. W. Fields.

Okla., Stuart.—Forrester & Rowley Oil & Gas Co., capital stock \$50,000, inceptd. by J. C. Forrester, H. G. Rowley and O. T. Nelson.

Okla., Tecumseh.—Tecumseh-Hendall Oil & Gas Co., capital \$12,000, inceptd. by J. K. Polk, Julius Krouch and W. E. Johnston.

Okla., Tulsa.—Gillcrease Oil Co., capital stock \$25,000, inceptd. by Thos. Gillcrease, Edw. Gillcrease and F. G. Walling.

Okla., Tulsa.—Morning Star Oil Co., capital stock \$30,000, inceptd. by J. E. Barber, J. A. Waldrop and L. H. Johnson.

Okla., Tulsa.—Jewel Oil Co., capital \$25,000, inceptd. by W. S. Morris, H. M. Preston and J. A. Thompson.

Okla., Tulsa.—Wells Oil & Gas Co., capital stock \$15,000, inceptd. by O. J. Wells, R. E. Banks and H. E. Smith.

Okla., Tulsa.—Big Dog Petroleum Co., capital stock \$20,000, inceptd. by H. D. Shupe, Cleveland; George C. Kiskaddon and C. G. Kiskaddon, Tulsa.

Okla., Tulsa.—Tiger Drilling Co., capital \$5000, inceptd. by John M. Ingram, R. E. Osman and O. S. Booth.

Okla., Wagoner.—Mary G. Oil & Gas Co., capital stock \$5000, inceptd. by H. B. Leonard, Ed. Gallaher and A. L. Evans.

Okla., Wanette.—Wanette Development Co., capital \$15,000, inceptd. by J. H. Royster, O. L. Beckner and F. C. LaRear.

Tex., Fort Worth.—Oil Refinery.—Magnolia Petroleum Co., Corsicana, increased capital stock by \$1,900,000 to provide for construction of oil refinery and other facilities to handle crude oil produced in Hendallton (Okla.) field; refinery rumored to cost nearly \$1,000,000. (Lately noted.)

Tex., Houston.—Clarion Oil Co. increased capital stock from \$50,000 to \$100,000.

Tex., Stamford.—Hyatt Oil & Gas Co., capital \$10,000, inceptd. by J. H. Baldwin, J. F. Baldwin and T. J. Pennell.

Tex., Taylor.—Planters' Oil Co., Luther Smith, Mgr., Hearne, Tex., let contract N. C. Jensen of Houston to build 100-ton cottonseed-oil mill costing \$100,000; main building 76x136 ft., with 2 see storage rooms 78x200 ft.; L. C. Smith of Hearne, Mgr. (Lately noted.)

Tex., Wichita Falls.—Elizabeth Oil & Gas Co., capital stock \$150,000, inceptd. by R. P. Langford, E. A. Dale and J. E. Head.

W. Va., Elizabeth.—Gas Plant.—Liquid Fuel & Gas Co. (Godfrey L. Cabo, Boston, Mass.) is reported to build plant costing \$20,000.

Va., Richmond.—Gas Plant.—City (lately noted as receiving improvement recommendations from W. P. Knowles, Supt. of Gas Works) does not contemplate large extensions this year.

ICE AND COLD-STORAGE PLANTS

Ala., Union Springs.—J. A. Hough is reported promoting establishment of ice factory.

Ark., Harrison.—Geo. D. Locke, Rogers, Ark., will expend \$25,000 for equipment for ice plant; install cold-storage plant for fruit. (See Electric Plants.)

Fla., Jacksonville.—City contemplates constructing ice plant; apply to next Legislature for authority. Phillip Prileau, City Engr.

Ky., Burgen.—W. H. De Baum, Perkyville, Ky., plans to build ice and electric-light plant.

Ky., Kuttawa.—Alexander Bros. & Co., Cadiz, Ky., purchased ice plant; will improve and operate; install deep-well pump and air lift; daily capacity 6 tons ice. (See Machinery Wanted.)

Ky., Shepherdsville.—Shepherdsville Electric-Light, Water & Cold-Storage Co. is being organized with \$10,000 capital stock and S. W. Bates Pres.; will purchase 5-ton ice machine and cold-storage equipment. (See Electric Plants.)

Miss., Columbus.—H. E. Johns of H. E. Johns & Co. contemplates establishment of 10-ton ice plant. (See Machinery Wanted.)

S. C., Georgetown.—Southern Extracting Co. will erect 12-ton ice plant at alcohol plant.

Tenn., Columbia.—Columbia Produce Co. let contract to Chicago company to construct cold-storage plant.

Tex., Conroe.—Conroe Ice & Light Co., J. McNamee, Pres., contemplates erecting ice plant.

Tex., Pflugerville.—Pflugerville Ice Factory (O. C. Pfluger & Bro.) will erect lately-noted 8-ton plant; 26x54 ft.; \$1000 building; machinery (arranged for) cost \$7500.

Tex., Sugarland.—Home Packing Co. will erect ice and cold-storage plant. (See Canning and Packing.)

IRRIGATION SYSTEMS

Tex., Bay City.—Matagorda County Rice & Irrigation Co. will construct system of irrigation in valley of Colorado River to irrigate about 40,000 acres.

IRON AND STEEL PLANTS

Ala., Woodward.—Iron Furnace.—Woodward Iron Co., Birmingham, Ala., will reline No. 3 furnace; no extensive improvements contemplated at present.

LAND DEVELOPMENTS

Ala., Birmingham.—United Development Co. (Bolton Agency, fiscal agents, 322½ S. 19th St., Birmingham), Geo. M. Webb, Pres., organized to develop lands in South, especially in Louisiana, Mississippi, Alabama and Florida; plans to colonize, develop town and manufacturing sites, subdivide for farming, etc.; paid-in capital \$24,000, with privilege of increasing. (Lately noted.)

Ala., Marengo County.—J. S. Purcell Mill Co., 5812 Third Ave. N., Birmingham, Ala., will incorporate company to develop timber tract purchased from Avocle Land Co., Baltimore, Md.; plans daily capacity 50,000 ft. of lumber.

Ala., Vredenburgh.—Vredenburgh Sawmill Co. (H. H. Nefels, Jr., & Co., agents, 203 City Bank Bldg., Mobile, Ala.) purchased 16,000 acres timber land; will cut timber and develop land for agriculture. (See Lumber Manufacturing.)

Fla., Bartow.—Valley Farms Co., capital stock \$10,000, inceptd.; Wm. A. Burgess, Pres.; L. W. Duncan, V.-P.; T. T. Hatton, Secy.

Fla., Lakeland.—Polk County Development Co., capital stock \$300,000, inceptd.; C. M. Clayton, Pres.; G. C. Rogan, V.-P.; W. T. Saummon, Treas.; G. C. Barton, Secy.

Fla., Vero.—Indian River Farms Co., J. H. Hass, Pres., 609 Putnam Bldg., Davenport, Iowa, is proceeding with development of town (Vero); contemplates Spanish architectural design; 8 or 10 blocks for park; also reserving tracts for city, church and school buildings, polo field, golf grounds, etc.; proceeding with road clearing and construction. (See Drainage Systems.)

Ga., Augusta.—W. S. Brand and Clark Grier of Georgia Mausoleum Co. will organize company to establish cemetery on The Hill, site of 26 acres; erect \$100,000 mausoleum.

Ky., Lawrenceburg.—Sand Spring Cemetery Co. inceptd. by J. C. Stratton, J. B. Stratton, W. A. Stratton, C. P. Harlow, D. Hanks and H. Stratton.

Ky., Louisville.—Cherokee Nursery Co., capital stock \$50,000, inceptd. by Edward Wilder, Chas. E. Gould and Chas. P. O'Brien.

La., New Orleans.—Bayou Cane Improvement Co. inceptd. with \$25,000 capital stock.

La., New Orleans.—Lake Misere Land Co. of Louisiana, capital stock \$23,000, inceptd.; Gustaf R. Westfeldt, Jr., Pres.; H. W. Kostmayer, V.-P.; Frank Wm. Hart, Secy. Treas.

N. C., Brevard.—Brevard Improvement Co., capital \$25,000, inceptd. by Thos. H. Shipman, J. W. McMinn and others.

S. C., Anderson.—Smith Realty Co., capital stock \$5000, inceptd. by J. J. Major, E. P. Vandiver, J. J. Smith and Lee G. Holleman.

Tenn., Trenton.—Louisiana Land & Development Co. inceptd. with \$50,000 capital stock.

Va., Max Meadows.—Geo. L. Carter Corp., maximum capital stock \$500,000, inceptd.; Geo. L. Carter, Pres.; J. C. Stone, Secy., both of Johnson City, Tenn.

Va., Richmond.—Virginia Farming & Lumber Corp., capital stock \$50,000, inceptd.; C. K. Bryant, Pres.; C. T. Underwood, Secy.

W. Va., Grafton.—Beaumont Improvement Co., capital stock \$12,000, inceptd. by Virgil T. Handley, Chas. R. Durbin, Wm. Morgan and others.

LUMBER MANUFACTURING

Ala., Millry.—McLemore & Knight will rebuild sawmill lately noted burned.

Ala., Vredenburgh.—Vredenburgh Sawmill Co. (H. H. Wefel, Jr., & Co., agents, 203 Bank Bldg., Mobile) purchased 16,000 acres timber land in Monroe county, known as Hunter-Benn tract; will cut timber, subdivide and develop for agriculture.

Ark., Ashdown.—Diamond Lumber Co., capital \$10,000, inceptd.; W. H. Adams, Pres.; J. H. Embry, Secy.

Ark., Heber Springs.—Planing.—B. W. Davis & Son will erect planing mill; install machinery.

Ark., Lorays.—Lorays Timber Co., capital stock \$5100, inceptd.; Geo. W. Webb, Pres.; F. M. Rogers, Secy.

Fla., Robinson Point.—Robinson Point Mill Co. will rebuild plant reported burned at estimated loss of \$75,000.

Fla., Lakewood.—Britton Lumber Co., E. P. Rodwell, Pres., will rebuild sawmill under supervision D. A. McPhail, Mgr.; cost \$25,000 to \$30,000; machinery orders placed. (Lately noted.)

Ga., Thomasville.—Macon Lumber Co. purchased 1400-acre tract of timber land; will erect sawmill; J. H. Lewis, Donaldsonville, Ga., in charge.

Ky., Viper.—Stephens & Cash, Winchester, Ky., are installing band mill with daily capacity 25,000 ft. of timber.

Md., Little Orleans.—Reichley Bros. & Co., Cumberland, Md., will erect sawmill; develop 10,000 acres timber.

Miss., Greenville.—Strickland Lumber Co., capital stock \$50,000, inceptd. by Jake L. Strickland, LeRoy Percy and others.

Miss., Greenwood.—Greenwood Lumber Co., capital stock \$25,000, inceptd. by M. L. Virden, P. F. Harrington and others.

N. C., Edenton.—Magnolia Land & Lumber Co., capital stock \$100,000, inceptd. by Chas. J. Barnes of Toledo, O.; James N. Pruden and W. D. Pruden.

S. C., Anderson.—Townsend Lumber Co., capital stock \$20,000, inceptd.; G. B. Townsend, Pres.; J. M. Evans, V.-P.; F. R. Prevost, Secy.

S. C., Union.—Lawrence Smith Lumber Co., capital stock \$5000, inceptd.; Lawrence Smith, Pres.; M. W. Hope, Secy.

Tenn., Nashville.—Alabama Red Cedar Co. has plans by Harry J. Frahn for plant at 1st St. and Georgia Ave.; mill construction; galvanized-iron exterior.

Tex., Tyler.—Carlton Lumber Co., capital stock \$25,000, inceptd. by E. E. Carlton, P. K. Birdwell and J. H. Seay.

Va., Clinch.—Sulphur Springs Lumber Co. purchased at \$60,000 timber boundary in Hunter's Valley, Scott county, about 5 mi. from Dunganon; will install sawmill and construct 7-mi. tramroad; use steel rails and motors.

Va., Lynchburg.—Peerless Lumber Co., capital stock \$100,000, inceptd.; Jas. T. Carter, Pres.; R. S. Burrus, Secy.

Va., Richmond.—Virginia Farming & Lumber Corp., capital stock \$50,000, chartered; C. K. Bryant, Pres.; C. T. Underwood, Secy.

METAL-WORKING PLANTS

N. C., Badin.—Aluminum.—Southern Aluminum Co. progressing with construction hydro-electric plant on Yadkin River, 1½ mi. from Badin, and on aluminum works at Badin; develop 120,000 electrical horsepower (75,000 immediate development) to manufacture 15,000 to 25,000 tons aluminum annually; hollow dam 1400 ft. long, 160 ft. wide at bottom and 20 ft. at top, of cyclopean concrete; powerhouse 580x60 ft.; total masonry, 450,000 cu. yds.; 650,000 cu. yds. rock excavation; structural steel in position for electrode plant, requiring 9 buildings; 4 furnace buildings for aluminum plant, each 395x40 ft.; 4 transfer, storage and foundry buildings, each 820x40 ft.; contractor for dam, powerhouse, etc., Hardaway Contracting Co., Columbus, Ga. Southern Aluminum Co. capitalized at \$12,000,000; controlled by French capital; W. P. Marshall, Gen. Mgr., and P. Bunet, Ch. Engr. and V.-P., of Paris, located at Badin.

MINING

Md., Ilchester.—Feldspar.—Albert Gorman of Oak Forest Park, Catonsville, Md., will develop feldspar deposits on 100 acres.

Mo., Greenfield.—Lead and Zinc.—Greenfield & Lockwood Mining Co. inceptd. by A. J. Young, C. W. Gillman and H. C. Hartfield.

Mo., Joplin.—Lead and Zinc.—Wellington Mining Co. will develop lease near Joplin; build concentrating plant.

Mo., Joplin.—Lead and Zinc.—Sun Mining Co., capital stock \$32,000, inceptd. by W. M. Staley, Geo. Spiva and R. H. Holton.

Mo., St. Louis.—Waterman Mining & Milling Co., capital stock \$2000, incptd. by Marck C. Sternberg, Jay Goldman and Milton Hellman.

Mo., St. Louis.—Sand and Gravel.—Farmers & Merchants' Transportation Co., 8011 S. Broadway, contemplates installing equipment to pump sand and gravel. (See Miscellaneous Enterprises and Machinery, etc., Wanted.)

Okla., Hattonville, P. O. at Miami.—Lead and Zinc.—Hervey H. Tample and others, Kansas City, Mo., leased land 2 mi. from Hattonville and contemplate developing; erect mill.

Tex., Corsicana.—Limestone.—E. C. Lee, Box 957, Houston, Tex., will develop limestone quarry and install crushing plant.

MISCELLANEOUS CONSTRUCTION

Fla., Daytona.—Seawall.—Trumbo Dredging Co., Daytona, will erect lately-noted seawall at cost of \$30,000; for reclamation.

Fla., Fort Myers.—Channel.—Wulferf-Captiva Development Co. organized to deepen channel from Wulferf Bulkhead, off Sanibel Island to Captiva Island, through Blind Pass; providing direct steamer service to two islands to and from Fort Myers; excavation 20,000 cu. yds. sand and mud; estimated cost \$5000 to \$6000; bids invited; Engrs., Davison & White, Fort Myers.

Fla., Jacksonville.—Docks, etc.—Board of Port Commrs., Henry G. Aird, Chmn., will issue \$1,500,000 bonds for lately-noted construction; plans by J. F. Coleman, Engr., New Orleans, La. (Plans previously noted as including purchase of land and rights, building docks, etc.)

Fla., Sanford.—Bulkheading.—City let contract Seminole Dredging Co. of Sanford to bulkhead Sanford Lake front; length 3000 ft.

Fla., Sanford.—Retaining Wall.—City let contract at \$56,000 to Seminole Dredging Co. to construct retaining wall about 3000 ft. long; filling in behind same 258,000 cu. yds. and extending sewer through made land. (Lately noted.)

Ga., Augusta.—Mausoleum.—W. S. Brand and Clark Grier will erect \$100,000 mausoleum. (See Land Developments.)

Ga., Savannah.—Steamship Terminals.—Ocean Steamship Co. let contract Gadsden Contracting Co., Savannah, at about \$38,000 for portion of preliminary work in connection with reconstruction of terminals, including bridging of western end of Philadelphia Slip, changing layout of tracks, etc. (Further facts lately noted.)

Ky., Augusta.—Mausoleum.—John A. Downard, Covington, Ky., let contract to erect mausoleum in Powersville cemetery; cost \$10,000.

Ky., St. Helena.—Boiler-house and Heating Plant.—Board of Public Safety, Ed. T. Tierney, Chmn., receives bids until Apr. 21 to erect boiler-house and steam-heating plant for Home for Aged and Infirm; drawings and specifications at office of John H. Thomas, Archt., 511 Keller Bldg.; lately noted at Ky., St. Helena. (See Machinery Wanted.)

La., Jeanerette.—Dredging.—Government will dredge in Bayou Teche; bids until Apr. 30; Edw. H. Schulz, Maj., Engrs., 325 Custom-house, New Orleans. (See Machinery Wanted.)

La., Morgan City.—Ship Channel.—Bay Ship Channel Co. incptd. with \$250,000 capital stock.

La., New Orleans.—Levees.—Thornton Cableway Levee Construction Co. incptd. with \$50,000 capital stock to construct levees.

Miss., Clarksdale.—Levee.—Levee Board will construct following levee enlargement: Levee sections 12 to 21, inclusive, except sections 15, 16, in DeSoto and Tunica counties; about 763,000 cu. yds.; sections 64 to 68, inclusive, in Coahoma county; about 676,000 cu. yds.; bids until Apr. 16; T. G. Dabney, Ch. Engr. (See Machinery Wanted.)

S. C., Charleston.—Coal Terminals.—Holston Corp. (Carolina, Clinchfield & Ohio Ry.), Ward Crosby, Ch. Engr., Johnson City, Tenn., plans soon to contract for coal terminals; J. W. Frazier Co., Engr., Cleveland, O., receives bids until Apr. 29 for dock 850 ft. long and foundation; deck of concrete cap, supported on concrete piles; fill retained by concrete sheet piles; latter vary 65 to 75 ft. in length; dock anchored to base of concrete tunnel, supported on wooden piles; Mr. Crosby considering lately-noted bids on 600,000 yds. dredging; these terminals previously reported as to include storage bins for 650,000 tons coal, loading machinery, etc. (Lately noted.)

Tenn., Memphis.—Levee.—City let contracts aggregating \$532,000 in connection with plans

to construct levee and pumping system to protect section of northern portion of city from Bayou Gayoso overflow, to Thos. Horan and Hickey Bros., St. Louis and Helena, Ark., at \$282,001.29, and Southern Asphalt Co., Birmingham, Ala., at \$229,000.29 to construct 18-ft. concrete drainage tunnels, former to build under Gayoso Ave. and latter under Huling Ave.; P. D. Harvey & Sons, Memphis, at \$21,125, for stripping and grading levee site from Winchester to Hickory Aves.; rejected all bids on sheet piling and concrete wall work and instructed C. C. Pashby, City Clerk, to readvertise for bids, inviting separate proposals on piling and concrete walls; \$1,500,000 bonds authorized for entire levee and pumping system. (Call for bids lately noted.)

Tex., Beaumont.—Docks, etc.—City votes May 19 on \$300,000 bonds to construct wharves, docks, terminals and warehouses. C. L. Scherer, City Engr.

Tex., Houston.—Ferry Approach.—Harris county, H. L. Washburn, Auditor, will construct approach to Lynchburg Ferry; bids until Apr. 27. (See Machinery Wanted.)

Tex., Kaufman.—Levee.—Improvement Dist. No. 1 of Kaufman county voted \$80,000 bonds to construct levees near Rosser to protect farms from overflow; E. J. House and Ernest Slayter of Rosser and E. K. Atwood of Ennis, Tex., appointed commissioners to supervise construction.

W. Va., Wheeling.—Wall.—Ohio county will construct concrete wall near Terrill's Bridge on National Rd.; bids until Apr. 18; Geo. W. Steenrod, County Road Engr. (See Machinery Wanted.)

MISCELLANEOUS ENTERPRISES

Ark., Van Buren.—Hardware and Furniture. Hunt & Ayres Hardware & Furniture Co., capital stock \$25,000, incptd.; R. T. Hunt, Pres.; Percy Boatright, Secy.

Fla., Avon Park.—Printing Plant.—G. W. Adams, Zolfo, Fla., will establish plant for newspaper and job printing.

Fla., Miami.—Electric Supplies.—Biscayne Electric Supply Co., capital stock \$10,000, incptd.; A. J. Bendle, Pres.; J. W. Earl Johnson, V.-P.; J. H. Bendle, Secy.

Fla., St. Petersburg.—Boat Line.—Company is being organized with \$100,000 capital stock by W. S. Blackburn, W. J. Thornton and others; plans to operate passenger boat line between St. Petersburg and Tampa.

Fla., St. Petersburg.—Air Boat Line.—Company is being organized with \$50,000 capital stock by C. E. Chambers and others to operate air boat line in St. Petersburg, later extending service to Tampa, Bradentown, etc.; use hydro-aeroplane.

Fla., Tampa.—Cigars.—Cuesta-Rey Cigar Co. let contract E. W. Parker of Tampa to erect addition to factory; cost \$18,000; Archt., John W. Biggers, Tampa.

Ga., Brunswick.—Creosoting Plant.—Brunswick Creosoting Co., capital stock \$150,000, incptd. by John M. Settle, John W. Bryant, C. Lee Cook, J. B. Wilson and others, all of Louisville, Ky.; will build \$100,000 creosoting plant with annual capacity 1,000,000 cross-ties or its equivalent, 50,000,000 board measure feet lumber; general offices at Louisville. (Lately noted.)

Ga., Columbus.—Grain Elevator.—City Mills is reported contemplating erecting addition to grain elevator; reinforced concrete construction; cost \$12,000.

Ga., Savannah.—Construction.—Midland Construction Co., capitalized at \$40,000, incptd. by Richard M. Lester, Chas. Edmondston, R. M. Lester and W. F. McCauley, Jr., to promote construction of apartment-houses, business buildings, etc.; will finance, also conduct general contracting of such buildings.

Ga., Tallapoosa.—Printing.—Walter Morrow will erect building at Alewife Ave. and Atlanta St.; lower floor to be used as printing office by L. E. Chandler Co., publisher of The Journal. (See Stores.)

Ga., Waycross.—Crematory.—City is reported to build crematory. Address The Mayor.

Ky., Lexington.—Construction.—Bell Construction Co., capital stock \$5000, incptd.; H. K. Bell, Priest.; Mrs. M. S. Bell, Secy.; will contract for engineering and construction and manufacture cement products.

Ky., Lenox.—Construction.—Newton Construction Co., capital stock \$2000, incptd. by T. M. Newton, J. R. Reese and D. C. Ferguson.

La., New Orleans.—Saddlery.—E. G. Awcock Saddlery Co. incptd. with \$10,000 capital stock.

La., New Orleans.—Shipyards.—J. H. Bernhard, V.-P. Alabama & New Orleans Trans-

portation Co., plans construction floating shipyards to build ships for inland waters and ultimately enlarge to construct ocean vessels; reported to ask bids to construct first of 10 units; first, 70x60 ft.; after construction in progress ask bids on tenth unit machine shop for plant; after completing first and tenth units, begin to construct remaining portion, completing shipyards to total length, 700x60 ft.; electric drive for machinery; purchased site on Mississippi 10 mi. below New Orleans; enterprise said to be financed by \$5,000,000 corporation formed by British and New England capitalists.

Miss., Meridian.—Laundry.—Sanitary Laundry, capital \$20,000, incptd.; will establish laundry at 6th St. and 17th Ave.

Mo., Kansas City.—Grain.—Lichtig Grain Co., capital stock \$15,000, incptd. by Henry Lichtig, C. C. Prithwein and Julius D. Bombeck.

Mo., Kansas City.—Grain Elevator.—Chicago, Milwaukee & St. Paul Ry., C. F. Loweth, Ch. Engr., Chicago, Ill., will erect grain elevator at Sheffield with storage capacity 1,000,000 bus. grain.

Mo., St. Joseph.—Paving, etc.—Land Paving Co., 52 Ballinger Bldg., incptd., capital stock \$2000, by Ira, M. O. and M. C. Land; street paving and sewers.

Mo., St. Louis.—Engineering.—Estimating Engineer Co., capital stock \$4000, incptd. by J. T. Dodds, Howard Bryan and Lee A. Hall.

Mo., St. Louis.—Transportation.—Farmers & Merchants' Transportation Co., 8011 S. Broadway (lately noted incptd., capital stock \$8800), organized; Wm. Ruprecht, Pres.-Mgr.; F. W. Feuerbacher, V.-P.; Wm. Schwarzsrauber, Secy.; Wm. Heil, Treas.; will add sand and gravel pumping to transportation business. (See Mining.)

Mo., St. Louis.—Construction.—Cement Construction Co., capital stock \$3100, incptd. by Morris I. Fleischer, Henry Kuhn Rudolph, E. Haumel and others.

Mo., Webster Groves.—Laundry.—Webster Groves Laundry Co. increased capital stock from \$4000 to \$8000.

N. C., Charlotte.—Implements.—Charlotte Implement Co., capital stock \$10,000, incptd. by J. O. Gardner, E. A. Ridgeway and P. C. Schultz.

N. C., Charlotte.—Chemicals.—Southern Dyestuff & Chemical Co. incptd. by Lynn W. Buck, Louis E. Green and John M. Barr.

N. C., Dunn.—Hardware.—Central Hardware Co., capital stock \$50,000, incptd. by Jas. A. Taylor, P. T. Massengill, E. T. Lee and E. Lee.

N. C., Hendersonville.—Laundry, etc.—Hendersonville Laundry, Ice & Fuel Co., capital stock \$35,000, incptd. by Chas. R. Whitaker, C. N. Wrenshall and H. R. Whitaker.

N. C., Swannquarter.—Supplies.—Swannquarter Supply Co., capital stock \$100,000, incptd. by Geo. R. Harris and others.

Okla., Oklahoma City.—Inventions.—Patterson-Clark Co., 1219 Colcord Bldg., incptd., capitalization \$100,000, to handle inventions of Benjamin G. Patterson and others; Mora C. Clark, Pres. and Gen. Mgr.; B. G. Patterson, V.-P.; F. D. Woodruff, Secy.-Treas.; Mr. Patterson in charge of engineering department.

S. C., Spartanburg.—Laundry.—Spartanburg Laundry (lately noted incptd., \$20,000 capital stock, by Chas. C. Kirby and others) succeeds Spartanburg Steam Laundry; is equipped.

Tex., Amarillo.—Laundry.—Troy Steam Laundry, capital \$15,000, incptd. by J. N. Vernon, Jean Vernon and H. H. Cooper.

Tex., Beeville.—Laundry.—Garrett & Foster leased building and will operate laundry; machinery purchased. (Young Men's Progressive League lately noted interested.)

Tex., Dallas.—Laundry.—J. Mollepell, 1907 St. Louis St., let contract to M. T. Forbes to erect laundry at 3038 Elm St.; 61x96 ft.; cost (without mechanical equipment) \$7500; brick walls; gravel roof; steam heat; electric lighting; cement sidewalks; machinery purchased; plumbing and wiring contracts not let; Lang & Witcheil, Archts., Dallas. (Lately noted under Stores.)

Tex., Dallas.—Incinerator.—City, Bevel Scott, Street Commr., will construct additional garbage incinerators during year; cost about \$10,000.

Tex., Ennis.—Publishing.—Ennis Printing & Publishing Co. (Ennis Daily News) will erect addition to plant; 35x40 ft.; 2 stories; principally of glass.

Tex., Lyford.—Publishing.—Union Publishing Co., capital stock \$5000, incptd. by C. E. Craig, C. W. Stephenson and C. H. Pease.

Va., Norfolk.—Pittsylvania Corp., capital

stock \$5000, incptd.; H. V. Hofhelmer, Pres.; A. S. Seidner, Secy.

Va., Norfolk.—Incinerator.—Finance Committee approved recommendation for appropriation of \$12,500 to purchase incinerator in 3 units; appropriation of \$4500 for purchasing and installing single-unit plant for Berkley section, and \$5000 for double-unit plant located at or near site of present plant in Norfolk.

Va., Richmond.—Publishing.—Times-Dispatch Publishing Co., capital stock \$100,000, with privilege of increasing to \$600,000; continue publication Times-Dispatch daily newspaper; Pres., Jules Breuchaud of New York; V.-P., J. O. Winston; Secy.-Treas., T. S. Winston; both of Richmond.

W. Va., Huntington.—Incinerator.—City Commrs. let contract Lewis & Kitchen of Chicago at \$4000 to build incinerator, and to Alphons Custodes Chimney Construction Co. of New York at \$2000 to build chimney; with building, plant will cost \$8000.

W. Va., Weston.—Dry Cleaning.—Francis Bros. will rebuild dry cleaning plant; purchased new machinery.

MISCELLANEOUS FACTORIES

Ala., Dothan.—Chemicals.—Dothan Chemical Co. will double size of plant; cost \$4000.

Ark., Fort Smith.—Rubber.—Tucker Duck & Rubber Co., capital stock \$60,000, incptd.; H. T. Tucker, Pres.

Ala., Sheffield.—Buttons.—Leavenworth Pearl Button Co., Leavenworth, Ind., F. W. Kirsch and A. E. Stewart, Mgrs., will establish shell button manufacturing plant; has building.

Fla., Jacksonville.—Window Glass, etc.—Wm. T. Cotter, 6 Park Bldg., contemplates installing plant to mfr. window glass, bottles, tumblers, etc. (See Machinery Wanted.)

Fla., Jacksonville.—Syrup.—Alabama-Georgia Syrup Co., L. B. Whitfield, Pres. and Mgr., Montgomery, Ala., is not ready to announce plans for establishment of lately-noted syrup refinery.

Fla., Live Oak.—Ice-cream.—Fred Walter, Hopkins, Mich., will establish ice-cream factory; has building.

Ga., Fairburn.—Marble.—W. T. Roberts purchased Fairburn Marble Works for \$7600.

Ky., Hazard.—Bakery.—Hazard Wholesale Baking & Supply Co., capital \$5000, incptd. by G. D. Holliday, J. G. Campbell and Tolbert Holliday.

Ky., Lexington.—Redrying.—Land Tobacco Redrying & Storage Co. closed contract with American Tobacco Co. to double capacity of plant in South Spring St.; one story; brick and steel; cost about \$50,000; will install 150 H. P. engine and increase about 60 H. P. in motive power in adjoining building, owned by Land Co. and leased by American Co.

Ky., Lexington.—Redrying.—Union Storage & Redrying Co. will construct redrying plant and lease to J. P. Taylor Co.; concrete and steel; cost about \$60,000.

Ky., Louisville.—Walker Mfg. Co., capital stock \$5000, incptd. by Mrs. C. J. Walker, A. B. McAfee and C. C. Johnson.

Ky., Owensboro.—Paint and Glass.—Owensboro Paint & Glass Co., capital \$7000, incptd. by H. D. Bourland, P. C. Frayser and J. B. Montague.

Ky., Louisville.—Millrite Mfg. Co., capital \$25,000, incptd. by John H. McKnight, Clyde F. Miller and Ivy Knight.

La., New Iberia.—Creamery.—New Iberia Creamery Co. incptd. with \$25,000 capital stock.

La., New Orleans.—Coffee.—Columbia Coffee Mills, Jno. T. Gibbons, Pres., 443 S. Peter St., will operate coffee mill; has building and equipment. (Jno. T. Gibbons Co. lately noted as purchasing plant operated by Schmidt & Ziegler.)

Md., Baltimore.—Bakery.—City Baking Co. has plans by John Freund, Jr., 508 Hoffman Bldg., Baltimore, for addition to White Bakery at 416-422 S. Hanover St.; 107x120 ft.; 2 stories; semi-fireproof construction; cost (including equipment) \$100,000; address proposals to Mr. Wallace D. White, Secy.; contractors estimating, B. F. Bennett, 123 S. Howard St.; R. B. Mason, 210 E. Lexington St.; Edw. Watters & Co., 559 N. Charles St.; Geo. Bunnecke & Son, 306 St. Paul St.; Henry S. Rippel, 1-7 Clay St.; Charles Stockhausen, 1-2-3-4 Marine Bank Bldg.; Consolidated Engineering Co., Emerson Tower Bldg.; Cowan Bldg. Co., 106 W. Madison St.; all of Baltimore. (Previously noted.)

Md., Elkton.—Acetylene Charging Plant.—Prest-O-Lite Co., Carl G. Fisher, Pres., Indianapolis, Ind., lately noted (incorrectly under "Easton") as erecting plant, is estab-

ishing charging plant for acetylene cylinders; about 7500 ft. floor space; buildings to cost about \$10,000; machinery, equipment, etc., cost about \$8000.

Mo., Lonaconing—Ice Cream.—Robt. Marshall is installing new machinery, including 10 H. P. Bessemer engine and Tyson brine ice cream machine; cost of improvements \$1000.

Miss., Pleasant Grove—Manufacturing.—Pleasant Grove Mfg. Co., capital stock \$10,000, inceptd. by J. E. Lusk, C. C. Jennings and others.

Mo., St. Louis—Auto Tires.—Reliable Auto Tire Co., capital \$3000, inceptd. by Joseph Sacks, Louis Wyner and Benjamin J. Sacks.

Mo., St. Louis—Specialties.—Railway Special Accessories Co., capital stock \$100,000, inceptd. by Henry E. Billman, Leo R. Mann and Walter C. Guelis.

Mo., St. Joseph—Monuments.—Richardson Monument Co., capital \$5000, inceptd. by Chas. P. Paul, A. H. McDonald and O. W. Watkins.

Mo., St. Louis—Brewery.—Union Brewing Co., will construct chimney costing \$5000; Contr., Wiedenboht Construction Co.

Mo., St. Louis—Glue.—Reardon Glue Co., capital stock \$10,000, inceptd. by Jas. A. Reardon, Arthur T. Gaertner and J. Vincent Reardon.

Mo., St. Louis—Maple Products.—Maple Products Co., capital stock \$30,000, inceptd. by Frank J. Smythe, Josiah Daily, Alan C. Caldwell and others; to manufacture maple sugar, flavor and syrups.

Mo., St. Louis—Paper Fasteners, etc.—Security Fastener Co., capital stock \$25,000, inceptd. by John Longmire, Wayne Wheeling, G. B. Farrar and Henry T. Lindsay; to mfr. paper fasteners and sealing devices.

Mo., St. Louis—Sanitary Appliances.—Sanitary Appliance Sales Corp., capital stock \$2500, inceptd. by Edw. L. Rech, Frank X. Nolan and Sophia M. Nolan.

Mo., St. Louis—Signs.—Press Sign Co., capital stock \$5000, inceptd. by Robert L. Etzkorn, Albert Levy and Florence Etzkorn.

Mo., St. Louis—Valves.—Mapel Mfg. Co., capital stock \$50,000, inceptd. by L. A. Mapel, W. P. Rowan and G. S. Elder to manufacture valves for machinery.

N. C., Charlotte—Chemicals.—Piedmont Electro-Chemical Co., capital stock \$100,000, inceptd. by J. Hechenblekner, D. C. Carmichael and E. R. Bucher.

N. C., Madison—Suspenders.—Penn Bros. Suspender Co., capital stock \$10,000, inceptd. by H. J. Penn, Holes E. Penn and Howard L. Penn.

Okla., Blackwell—Yeast.—Mothers' Yeast Sales Co., capital stock \$3000, inceptd. by Jake Schland, S. S. Schland and Claude C. Schaft.

Okla., Sand Springs—Leggins.—Army Leggins Co., capital \$10,000, inceptd. by G. Ciocloia and Mary Ciocloia of Sand Springs and E. F. Gester of Tulsa.

S. C., Columbia—Bottling.—L. B. Owens is erecting building, 20x70 ft., for Richland County Dispensary. (See Warehouses.)

S. C., Greenville—Bottling.—Chero-Cola Bottling Co. will erect addition to plant; 2 stories; sheet iron.

S. C., Greenville—Starch.—Guion Starch Co., capital \$1200, inceptd. by V. Q. Guion and B. A. Morgan.

S. C., Spartanburg—Beverages.—Spartanburg Chero-Cola Bottling Co. organized; J. B. Fitzgerald, Prest.; J. C. May, V.-P.; J. B. McCarty, Secy.-Treas.; operate bottling plant; daily capacity 500 cases soft drinks. (Lately reported inceptd., \$7500 capital.)

Tenn., Chattanooga—Medicine.—Southern India Medicine Co., capital stock \$10,000, inceptd. by E. W. Griggs, Richard Roleman, A. G. Beal and others.

Tenn., Nashville—Magnesite Products.—Magnesite Products Co., capital \$12,000, incorporated by J. Marlin, J. S. Minton, M. S. Ross and others.

Tex., Lufkin—Mattresses.—John Dowdle, Abilene, Tex., and associates will establish mattress factory; have building and machinery.

Tex., Waco—Stone, etc.—Central Texas Granite Co. organized with J. C. Gage, Prest.-Mgr.; Neal Dubberly, V.-P.; Geo. P. Turner, Secy.-Treas.; succeeds Central Texas Monument Co.; will mfr. stone, artificial stone products, etc. (Lately noted inceptd., under Miscellaneous Enterprises, with \$12,000 capital stock.)

Tex., Wichita Falls—Window Glass.—Wichita Falls Window Glass Co., W. G. Shaw, Gen. Mgr., let contract for machinery to mfr. window glass; daily capacity 700 50-ft. boxes; will make certain changes in buildings; no contract. (Lately noted.)

Va., Newport News—Bottling.—Coca-Cola Bottling Works, capital stock \$15,000, inceptd.: J. M. Hines, Prest., Greenville, N. C.; R. M. Brown, Secy., Tarboro, N. C.

Va., Richmond—Lime Grinding.—State will establish lime-grinding plant; Major J. B. Wood, Supt. Penitentiary.

Va., Richmond—Tobacco.—Cameron-Neal Tobacco Co., capital stock \$25,000, inceptd.; Alexander Cameron, Jr., Prest.; E. Don Cameron, Secy.

Va., Richmond—Tobacco.—Patterson Bros. Tobacco Co. increased capital stock from \$250,000 to \$500,000.

W. Va., Beckley—Printing, etc.—Bank of Raleigh will contract to erect building to contain printing plant, etc. (See Bank and Office Bldgs.)

W. Va., Clarksburg—Bottles.—Sanitary Glass Milk Bottle Co. (Harry Edmunds of Clarksburg and W. G. Edmunds of Pittsburgh, Pa.) will erect plant; cost \$50,000.

W. Va., Elm Grove—Remedy.—Wheeling Remedy Co., capital stock \$25,000, inceptd. by E. W. Atkinson, Geo. McCausland, D. M. Thornburg and others.

W. Va., Pemberton—Bottling.—Lilly Ice & Bottling Works organized; P. E. Lilly, Prest.; J. A. Wood, V.-P.; Lowry Lewis, Secy.; acquired plant of Pemberton Ice & Bottling Co.; will enlarge and improve; install machinery to mfr. ice cream; equipment purchased. (Lately noted inceptd., \$25,000 capital stock.)

W. Va., Wheeling—Extracts, etc.—Graner Mfg. Co., capital stock \$10,000, inceptd. by Lafayette Graner, E. E. Long, Oliver D. Graner and others.

MOTORS AND GARAGES

Ark., Little Rock—Garage.—Little Rock Auto Co., Geo. B. Rose, owner, is having plans prepared by H. J. Parker to rebuild garage lately noted burned.

D. C., Washington—Automobiles.—Progressive Motor Co., capital stock \$10,000, inceptd.; Paul H. Macnell, Prest.; R. L. Macnell, Secy., Union Trust Bldg.

Ky., Bowling Green—Automobiles.—Imperial Auto Co., capital \$8000, inceptd. by J. B. Lucas, J. W. Massey, J. M. Lovell and G. D. Vance.

Ky., Lexington—Automobiles.—Moon Auto Co., capital \$8000, inceptd. by B. B. Reed, E. H. Reed and Pat McCann.

Miss., Columbus—Automobiles.—Columbus Auto Co., capital \$1000, inceptd. by Sam Kaye, H. J. Applewhite and others.

Mo., St. Louis—Automobiles.—Jeffery Motor Car Co., capital stock \$4000, inceptd. by Albert Albrecht, Thos. V. Murphy and George Eigel.

Mo., St. Louis—Automobiles.—Reliable Auto Tire Co., capital stock \$5000, inceptd. by Joe Sacks, Louis Wyner and Ben J. Sacks.

Mo., St. Louis—Garage.—Schoellhorn-Albrecht Real Estate Co. is reported to erect garage to be leased to automobile company.

N. C., Creedmoor—Automobiles.—Granville Automobile Co., capital stock \$25,000, inceptd. by S. C. Lyon, I. E. Harris, R. G. Rogers and others.

Tex., Lockhart—Garage.—Lea Beaty will erect garage; cement or brick; capacity 50 cars.

Va., Pulaski—Automobiles.—Pulaski Motor Car Co., capital stock \$25,000, inceptd.; J. W. Eckman, Prest.; W. H. Trolinger, Secy.

Va., Richmond—Cyclecars.—Szekely Cyclecar Co., capital stock \$5000, inceptd.; H. F. Bernhard, Prest.; E. J. Bernhard, Secy.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ga., Savannah—Atlantic Coast Line R. R.—E. B. Pleasants, Chief Engr., Wilmington, N. C., is reported to rebuild burned kaint bins.

ROAD AND STREET WORK

Ala., Florence.—City will construct ½ mi. water-bound macadam street, with concrete curb and gutter, and storm sewers; Lund & Hill, Consult. Engrs., Little Rock, Ark.; bids until May 4. City also contemplates laying about 30,000 sq. yds. asphalt paving; this to be voted on May 4. (See Machinery Wanted.)

Ala., Gadsden.—City is considering ordinance providing for vote on \$100,000 bonds for street paving; Chas. L. Marsh, City Engr.

Ala., Guntersville.—Marshall County Comms. let contract Goodrich & Crinkley, Anniston, to construct roads. (Various road construction work lately noted.)

Ala., Rockford.—Coosa County Comms., R. P. Boyd, Asst. State Highway Engr., let contract to construct 4½ mi. road in Coosa county between Kellytown and Rickford. (Lately noted.)

Ark., Conway.—Board of Improvement, Street Improvement Dist. No. 1, will construct proposed street paving; 12,000 yds.; 3500 ft. concrete curb and gutter, drain tile, catch basins, etc.; let contract April 14; G. A. Burr, Engr.

Ark., Little Rock.—City will undertake certain grading, guttering and drainage work; bids until Apr. 16 at office of D. B. Renfro, Jr., Secy., Bank of Commerce Bldg. (See Machinery Wanted.)

Ark., Little Rock.—Road Improvement Dist. No. 5, F. J. Schmutz, Secy. of Pulaski County, will make improvements; bids until Apr. 15 at office of Mercantile Trust Co.'s Bldg.; Hugh R. Carter, Engr. for Dist., New State Capitol. (See Machinery Wanted.)

Fla., Avon Park.—DeSoto County Comms., Arcadia, contemplate calling vote on bonds to construct 100 mi. hard road and 70 mi. graded road in Avon Park Dist.

Fla., Clearwater.—City and Pinellas County Comms., Dist. No. 3, let contract at \$1.74 per sq. yd. to Georgia Engineering Co., Augusta, Ga., to pave with brick S. Fort Harrison Ave. from Turner St. to Bellevue Blvd.; cement grouted making work, practically monolithic block pavement, 30 ft. wide in city limits, with combination concrete curb and gutters, 20 ft. in county, with flush 4-in. granite curb. (Lately noted.)

Fla., Jacksonville.—Duval County Comms. let contract Geo. R. Foster to construct Camp Site highway; 15 ft. wide between curbing; length 5300 ft.; county to do grading and place curbing; A. F. Harley, Engr., Jacksonville. (Call for bids lately noted.)

Fla., Melbourne.—City voted \$2000 bonds to improve streets; V. A. Pierce, Mayor.

Fla., Orlando.—Orlando county will construct brick paving: Highway No. 1, 68,650 sq. yds.; No. 2, 22,100 sq. yds.; No. 3, 38,960 sq. yds.; No. 4, 84,500 sq. yds.; No. 5, 84,500 sq. yds.; G. R. Ramsey, Highway Engr., Orlando; M. O. Overstreet, Chrmn. Board County Comms. (See Machinery Wanted.)

Fla., Tampa.—City let contract at about \$50,000 to Edwards Construction Co., Tampa, for paving 10 streets with vitrified brick, total about 28,255 yds.; to J. W. Teasley at \$78 for retaining wall and sidewalks at 10th Ave. playground; at 13½ cents per yd. to Holmes & McCranie for sidewalks. (Lately noted.)

Fla., Tampa.—Isham Randolph & Co., Engrs., Chicago, Ill., submitted report estimating cost of extending Bayshore Drive from present termination to Biglow property at \$245,359.26, including \$149,100 for seawall paralleling present road, \$33,650 for pavement, \$4024 for gutters and curb, \$6,156.62 for storm sewers and \$6570 for ornamental lighting fixtures; material for seawall to be dredged from bay adjoining wall, providing channel for small boats; width of roadway 24 ft.; width of sidewalks 7 ft.; parkway between old and new boulevards, through which car tracks will extend.

Ga., Decatur.—Granite Highway Assn. of De Kalb county, R. J. Freeman, Road Commr., will construct 18 mi. macadamized road with asphalt binder; amount available \$70,000; bids opened May 4; C. S. Mercer, Engr.; lately noted. (See Machinery Wanted.)

Ky., Mt. Sterling.—Government will build highway from Mt. Sterling to Sharpsburg; cost \$3400 per mile; R. C. Thoms and Thos. Hare in charge.

Ky., Somerset.—Pulaski county votes Apr. 24 on \$300,000 bonds for road construction; C. M. Langdon, County Clerk. (Lately noted as to vote Apr. 17 on bond question.)

La., Abbeville.—Vermilion parish, A. O. Landry, Secy. Police Jury, will issue lately noted \$72,500 bonds for road construction. (See Machinery Wanted.)

La., Jennings.—Jefferson Davis parish will construct roads; surveys made. Address Police Jury.

La., Lake Arthur.—City will construct proposed 14,000 sq. ft. sidewalk and 1500 lin. ft. curb; opens bids May 5; Engr., T. H. Mandell, Lake Charles, La. (See Machinery Wanted.)

La., New Iberia.—City will construct about 110,000 sq. ft. concrete sidewalks and

33,000 lin. ft. concrete curb; bids until Apr. 15; Alphe Fontellieu, Mayor. (See Machinery Wanted.)

La., New Orleans.—City, A. G. Ricks, Commr., will banquette Henry Clay Ave. from Hurst to Perrier Sts.; also reline and reset existing banquette curb on both sides of N. Rampart St. from St. Louis St. to Esplanade Ave.; bids until Apr. 17; plans and specifications at office of City Engr. (See Machinery Wanted.)

La., New Orleans.—Highway Dept., Board of State Engrs., 104 New Orleans Court Bldg., will construct with gravel following main public highways: Bossier City to Ninoch, about 25 mi.; Old Shed Rd. to Red Chute Bayou, 6 mi.; Bossier City to Benton, 13 mi.; all in Road Dist. No. 1, Bossier parish; bids until Apr. 20; W. E. Atkinson, State Highway Engr. (See Machinery Wanted.)

La., Shreveport.—Bossier Parish Police Jury plans construction of 44 mi. of roads; opens bids Apr. 20.

Md., Baltimore.—State Roads Commission let contract to Fisher & Carozza, 305 E. Preston St., Baltimore, to construct section of Belair Rd. from Perry Hall to Kingstonville with macadam, distance of 3.34 mi.; to Geo. Maguire, 3703 Park Heights Ave., Baltimore, to construct with concrete Westport Rd. from English Consul's estate to Patapsco River, distance of 1.14 mi.

Md., Baltimore.—City will grade, curb and pave, under contract No. 87, Baltimore St. from Liberty St. to Market Pl.; sheet asphalt, 12,500 sq. yds.; vitrified block, 650 sq. yds.; scoria block, 2350 sq. yds.; wood block, 15,400 sq. yds.; bids until Apr. 22; plans and specifications in office R. Keith Compton, Chrmn. Paving Com. and Consult. Engr. (See Machinery Wanted.)

Md., Annapolis.—Anne Arundel county, S. O. Tilghman, Clk., will construct section of State-aid highway between Fifth Dist. line and Stewart's corner, distance of 1 mi.; bids until Apr. 21; E. T. Hayman, Road Engr. (See Machinery Wanted.)

Md., Baltimore.—City let Contract No. 129 to P. Flanagan & Sons, 120 E. Lexington St., at \$143,315; about 60,000 sq. yds.; Contract No. 131 to Standard Contracting Co., 506-508 E. Baltimore St., at \$3465, providing for grading of Rosedale St. from Windsor to Elgin Ave.; Contracts Nos. 82 and 83 to Jas. C. Quinn at \$23,894.72 and \$10,414.55, respectively, including paving of portions of Holliday, Bath, Pleasant and other streets. (Call for bids lately noted.)

Md., Cumberland.—Alleghany County Commissioners will issue \$10,000 bonds to improve roads; this is last of series of \$30,000 bonds previously authorized.

Md., Cumberland.—Alleghany County Comms. plan to construct 3 1-10 mi. highway.

Md., Rising Sun.—Town voted on bonds for street improvements and to complete water-works. Address Town Clerk.

Miss., Forest.—Scott County Comms. let contract at \$5613.35 to Boyd & Bradshaw, Columbia, Miss., to construct 7 mi. road, extending north to Harpersville; Xavier A. Kramer, Engr., Magnolia, Miss. (Lately noted.)

Miss., Jackson.—Hinds County Supvrs. are reported as proposing to authorize \$125,000 bonds to construct roads in Dist. No. 2.

Mo., Liberty.—Comms. Liberty-Kansas City Blvd. Rd. Dist. (W. W. Cosby, A. W. Lightburne and T. J. Ward) is considering plans for issuing \$77,000 bonds authorized to construct road from Liberty to Kansas City.

Mo., St. Louis.—City let contract for street paving as follows: Contract 11,149, Gravois Ave., at \$44,401, and contract 11,151, Gravois Ave., at \$61,285; to Hiram Lloyds Building & Construction Co., Odd Fellows' Bldg., contract 11,150, Gravois Ave., at \$67,386, and contract 11,152, Gravois Ave., at \$58,081, to Haniel Quarry & Construction Co., Ashland and Euclid Aves. (Lately noted.)

Mo., Webster Groves.—City will construct 15,000 sq. yds. concrete paving; bids Apr. 27; R. L. Mook, Engr., City Hall; lately noted. (See Machinery Wanted.)

N. C., Concord.—City, G. A. Hartsell, Mayor, will construct sidewalks; probably bitulithic and sheet asphalt.

N. C., Danbury.—W. G. Moore and associates organized company to construct toll road from Moore's Spring to Quaker Gap, distance 4 mi.; estimated cost \$8000.

N. C., Hertford.—City will vote on May 5 on \$50,000 bonds for paving and street improvements, sewers, drainage and water-works. Address The Mayor.

N. C., Marshall.—Madison County Highway Com., S. W. Brown, Secy., asks bids

until Apr. 29* to grade about 7.7 mi. earth road; 4 sections; about 39,366 cu. yds. excavation; J. B. Clingman, County Road Engr.; work previously noted. (See Machinery Wanted.)

N. C., Newton.—City, G. A. Warlick, Mayor, will construct bituminous macadam paving; ready to receive bids by May 1. (See Machinery Wanted.)

N. C., Rocky Mount.—City, L. F. Tillery, Mayor, asks bids until May 5 to construct following previously-noted work: 40,000 sq. yds. asphaltic or other paving; 10 mi. 8 to 18-in. pipe sewers; 10 mi. 4 to 10-in. cast-iron gas pipe lines; Gilbert C. White, Engr., Charlotte, N. C. (See Machinery Wanted.)

N. C., Statesville.—Iredell County Comms. will extend E. Broad St. east from city limits to Mocksville Rd.

N. C., Taylorsville.—Alexander county votes June 9 on \$100,000 road bonds. Address County Comms. (Lately noted.)

S. C., Columbia.—City, W. H. Gibbs, Mayor, asks bids until Apr. 28 on about 60,000 sq. yds. proposed street paving and extension of concrete or granite curbs; sheet asphalt, bituminous concrete or bituminous macadam; John McNeal, City Engr. (See Machinery Wanted.)

S. C., Greenwood.—City will construct additional bitulithic street paving on Maxwell Ave. and Waller Ave. Address The Mayor.

Tenn., Chattanooga.—City let contract West Construction Co., Chattanooga, for cement curb and gutter, sidewalks and asphalt concrete paving on concrete foundation.

Tenn., Chattanooga.—Hamilton county let contract West Construction Co., Chattanooga, for road construction costing \$50,000.

Tenn., Jackson.—City plans to improve and pave streets. Address The Mayor.

Tenn., Knoxville.—City will pave Gay St. from Hill to Jackson Aves., for Improvement Dist. No. 101, about 11,724 sq. yds. of standardized material; bids until Apr. 27; D. G. Leahy, Recorder; lately noted. (See Machinery Wanted.)

Tenn., Lexington.—Henderson county votes Aug. 6 on \$200,000 bonds to improve roads. Address County Comms.

Tenn., London.—Pike Comms., London county, C. H. Bacon, Chrmn., will grade, drain and surface with water-bound macadam about 7 mi. post road; bids until Apr. 24. (See Machinery Wanted.)

Tenn., Trenton.—Gibson County Court voted appropriation \$10,000 to construct 2 roads across county, one from Humboldt to Kenton and other from Milan to Eaton.

Tex., Corpus Christi.—City, Roy Miller, Mayor, will expend \$50,000 (city's proportion) to complete contracts let Sept., 1912, for 149,000 sq. yds. bitulithic paving; contractor, Texas Bitulithic Co., Corpus Christi, and Dallas, Tex.; H. A. Stevens, Engr. (Previously noted.)

Tex., Crystal City.—City voted bonds to acquire water-works and make improvements to streets; amount available \$21,000; W. B. Guillaudeu, Sr., Mayor. (Lately noted contemplating bond issue for street improvements.)

Tex., Dallas.—City will pave west side Munger Blvd. from Rieger Ave. to Junius St.; J. M. Preston, City Engr., filed report with City Comms. estimating cost at \$7463.92.

Tex., Dallas.—Dallas county will pave Dallas-Oak Cliff viaduct; bids May 2; J. F. Witt, County Engr.; previously noted (under Bridges, Culverts and Viaducts) as voting \$75,000 bonds. (See Machinery Wanted.)

Tex., Galveston.—City Comms. authorized A. T. Dickey, City Engr., to invite bids to extend paving on Broadway from 29th to 39th Sts. and from 11th St. to Seawall; total of 17 blocks.

Tex., Houston.—City, E. B. Bonney, Secy., will pave portions of Wilson, Andrews and Robin Sts. and Polk Ave.; estimated cost, \$38,580; bids until Apr. 18; E. E. Sands, City Engr. (See Machinery Wanted.)

Tex., Houston.—City Council let following contracts to pave streets: Uvalde Rock Asphalt Co., 1 Broadway, New York, Uvalde rock asphalt on Capitol St. from Austin to Crawford St., appropriation \$3600; Prairie St. from Main to Travis St., appropriation \$1500, and Leeland St. from Austin to Crawford St., appropriation \$2500; Texas Bitulithic Co., Dallas, Tex., Capitol St. from Main to San Jacinto, bitulithic, 3-in. thickness, appropriation \$5000; Horton & Horton, Houston, Travis St. from Rusk to Texas, vertical fiber brick, appropriation \$3900.

Tex., Houston.—City, E. B. Bonney, Secy., will pave Webster Ave. from Crawford to St. Emanuel St.; grade and pave McGowan

Ave. from east line of Main St. and west line of Crawford St.; bids until Apr. 13; E. E. Sands, City Engr. (See Machinery Wanted.)

Tex., Houston.—City, E. B. Bonney, Secy., will pave Franklin Ave. between Travis St. to Buffalo Bayou; bids until Apr. 15; E. E. Sands, City Engr. (See Machinery Wanted.)

Tex., Houston.—Harris county, H. L. Washburn, Auditor, will grade Addicks and Katy Rds. and place thereon 15,000 yds. gravel; grade Washington county Rd. and place thereon 5600 cu. yds. gravel; bids until Apr. 16; Howe & Wise, Engrs., First National Bank Bldg., Houston. (See Machinery Wanted.)

Tex., Houston.—Harris county, H. L. Washburn, Auditor, will grade and place gravel on 4 mi. road from Westheimer Rd. to Alief; also for grading and placing material on East Montgomery and Aldine county Rd.; for grading and placing material on East Montgomery and Westfield Rds.; for grading and placing material on Westfield and Humble Rds.; bids Apr. 15; Howe & Wise, Engrs., First National Bank Bldg., Houston. (See Machinery Wanted.)

Tex., Houston.—City, E. B. Bonney, Secy., will grade and pave Louisiana St. from north line of Dallas Ave. and south line of Capitol Ave. with the following materials as shall be selected: Trinidad sheet asphalt; asphaltic concrete; bitulithic; 3-in. wood block; 3½-in. wood block standard brick; vertical fiber brick, asphalt filler; Uvalde rock asphalt and Westrumite; bids until Apr. 20; E. E. Sands, City Engr. (See Machinery Wanted.)

Tex., Houston.—Harris county, H. L. Washburn, Auditor, receives bids until Apr. 27, as follows: (A) 7300 cu. yds. road gravel, f. o. b. cars; (b) hauling and placing 7300 cu. yds. gravel on Houston-Clinton Rd. and grading said road about 4 mi. (A) 2500 cu. yds. road gravel, delivery f. o. b. cars unloading track, M. K. & T. R. R., 7th St., Houston Heights, for grading 28th St., Sunset Heights to Houston Ave. extension; (b) hauling 2500 cu. yds. gravel and placing same on road and necessary grading and spreading. For 5500 cu. yds. reef shell, f. o. b. switch near Brunner, Tex., and for paving Roy St., etc. (A) 6200 cu. yds. road gravel, f. o. b. streets, Smith, for grading Harrisburg-Main St. Cut-off Rd.; (b) same f. o. b. point of origin; (c) hauling and placing 6200 cu. yds. gravel and grading 4½ mi. Harrisburg-Main St. Cut-off Rd. For hauling, grading and placing 3500 cu. yds. shell, paving Roy St. from Klam St. to Long St., 2 blocks to Gentry; Gentry 4 blocks; Thompson, 7 blocks, beginning at Washington and running north; Patterson, 8 blocks. For construction of Navigation Blvd. complete, material to be reef shell, about 3300 cu. yds., and bid to include material, hauling, grading and construction; plans and specifications at office Howe & Wise, Engrs., First National Bank Bldg., Houston. (See Machinery Wanted.)

Tex., Kaufman.—Two precincts of Kaufman county vote Apr. 16 on \$300,000 bonds to construct roads. Address County Comms. (Lately noted to have defeated bonds.)

Tex., New Braunfels.—Comal county will issue \$17,000 road and bridge bonds; further particulars not available; Adolf Stein, County Judge.

Tex., Paris.—City Council let contract to pave 22d St. from Lamar Ave. to Clarksville St.; gravel roadway; concrete curb and gutter.

Tex., Rice.—City let contract to Corsicana company to lay 15,000 sq. ft. concrete sidewalks. Address The Mayor.

Tex., San Antonio.—Bexar County Commissioners completed tentative plans for improvements of roads in Precincts Nos. 1, 2 and 4; plans for Precinct No. 3 will be completed shortly; total mileage about 100; cost about \$250,000.

Tex., San Antonio.—Rockhill Toll Road Co., capital stock \$3000, incptd. by O. G. Frantz, Henry C. King, Jr., Harvey L. Page and others; operate toll roads in various counties.

Tex., Seminola.—Gaines County Comms. let contract to S. H. Howell, Tahoka, Tex., to construct road; distance of 7 mi. at \$225 per mi.

Tex., Timpson.—City, B. J. Hawthorn, Mayor, voted lately-noted \$10,000 bonds to construct cement sidewalks; engineer not engaged.

Tex., Tyler.—Comms. Tyler Good Roads Dist. let contract Karner Bros., Dallas, at \$33,534 to construct 25 mi. sand-clay roads; this is first of series to be constructed under \$300,000 bond issue; S. C. Dreyfus of Alabama will be in charge.

Va., Cape Henry.—Cape Henry Syndicate, W. D. Southall, Secy.-Treas., 400 Citizens' Bank Bldg., Norfolk, Va., will lay 1800 running ft. granolithic sidewalks; bids asked. (See Machinery Wanted.)

Va., Lynchburg.—Finance Comm. recommended \$50,000 appropriation to pave business section of Main St.; Harry L. Shaner, City Engr.

Va., Norfolk.—Seventh Ward Local Board, J. D. Hank, Jr., Secy., let contract Louis Lawson at \$38,984 for 25,000 sq. yds. bituminous concrete pavement in Riverview Section and Highland Park, and to J. U. Addenbrook's Sons at \$2200 for curb and gutter on Holly Ave. (Call for bids lately noted.)

Va., Norton.—City, T. M. Pepper, Mayor, will issue \$5000 bonds for street improvements.

Va., Richmond.—City contemplates appropriating \$5800 to construct Riverside Drive from Gamble's Hill to William Byrd Park; Chas. E. Bolling, City Engr.

Va., Suffolk.—Suffolk Automobile Asso. plans to build highway from Norfolk to Richmond by way of Franklin and Smithfield, Va.

W. Va., Beckley.—Raleigh County Court will vote in Town Dist. on bonds for permanent roads. Address County Comms.

W. Va., Parkersburg.—Clay Dist. of Wood County will vote May 11 on \$40,000 bonds. Address County Comms.

W. Va., Parkersburg.—Wood county will pave Camden Ave. and Broadway Rd. in Tygart Dist.; bids until Apr. 15 on brick paving with concrete foundation and cement filler; Warren paving with Warrenite surface and concrete paving; Wm. Dudley, Clerk. (See Machinery Wanted.)

SEWER CONSTRUCTION

Fla., Dade City.—Town is considering construction of sewer system to cost about \$10,000. Address Town Clerk.

Ga., Augusta.—River & Canal Com., 747 Broad St., let contract to Jonas & Garrettson, West Palm Beach, Fla., at \$38,000 to construct 3690 lin. ft. reinforced concrete and 1745 lin. ft. vitrified pipe sewer, 18 to 66 in. in diam., 14 manholes and 46 catch-basins; to Case & Cothran, Candler Bldg., Atlanta, Ga., at \$15,079.82 for 1800 lin. ft. reinforced concrete and 2300 lin. ft. vitrified pipe sewers, 12 to 49 in. in diam., 5 manholes and 8 catch-basins; Nisbet Wingfield, Ch. Engr. (Lately noted.)

Ga., Columbus.—East Wynnton Drainage Co. incptd. with N. A. Brown, Prest.; C. E. Turner, V.-P.; J. W. Schuessler, Secy.; to construct sewer system.

Ga., Richland.—City will probably have surveys made by J. B. McCrary Co., Atlanta, Ga., for sewer system.

Ky., Whitesburg.—City will not construct sewers. (Recent report incorrect.)

Md., Baltimore.—City let sanitary contract No. 123 to David M. Andrew Co., Baltimore; bid \$50,262.75; Calvin W. Hendrick, Ch. Engr.; bids lately noted. (Standard Contracting Co.'s recently-noted contract was for No. 132.)

Md., Mt. Rainier.—City votes Apr. 21 on \$100,000 bonds for sewer system and water-works. Address The Mayor.

Mo., Webster Groves.—City will expend \$25,000 to construct sewers; 17,500 ft. 8 in., 1500 ft. 10 in. and 1500 ft. 12 in. vitrified tile sewers, 39 manholes, 15 flush tanks and complete septic tank; cost of disposal plant \$5000; bids opened Apr. 20; R. L. Mook, Engr., City Hall; will build sanitary sewers for Dist. No. 8 and concrete storm-water sewer during summer; storm sewer to cost \$40,000; lately noted. (See Machinery Wanted.)

N. C., Hertford.—City will vote on May 5 on \$50,000 bonds for sewers, drainages, water-works, paving and street improvements. Address The Mayor.

N. C., Rocky Mount.—City, L. F. Tillery, Mayor, asks bids until May 5 on lately-noted sewer construction; 10 mi. pipe sewers, 8 to 18 in. diam.; Gilbert C. White, Engr., Charlotte. (See Road and Street Work and Machinery Wanted.)

N. C., West Asheville, P. O. Asheville.—C. E. Waddell, Engr., submitted report on construction of sewer system and water-works; estimated cost of sewer system \$14,000 and of water-works \$30,000. (Lately noted.)

S. C., Greenville.—J. E. Sirrine, Engr., has made preliminary estimate for lately-noted sewerage construction trunk line sewer, to serve Mills Mfg. Co., Duncan Mills, Judson Mills, Brandon Mills, and probably part of city; cost, \$20,000 to \$25,000; plans not completed.

Tenn., Elkmont.—Appalachian Club, Knoxville, Tenn., will enlarge sewer system, water-works and electric-light plant. (See Miscellaneous Structures.)

Tenn., Fayetteville.—City, Hiram Higgins, Clerk, voted \$60,000 bonds for lately-noted sewer construction.

Tenn., Knoxville.—City will lay about 470 lin. ft. 8 in. lateral sewer from 14th St. west to a connection with Third Creek main sewer; cast iron and vitrified pipe; bids until Apr. 17; D. G. Leahy, Recorder. (See Machinery Wanted.)

Tenn., Memphis.—Noli Construction Co., Chattanooga, Tenn., lowest bidder at \$53,319.50 to construct West Side sewer; C. C. Pashby, City Clerk. (Call for bids lately noted.)

Tex., Eagle Pass.—City contemplates constructing sewer system; distance 2500 ft.; cost about \$5000. Address The Mayor.

Tex., Granger.—City voted \$15,000 bonds to construct sewers. Address The Mayor. (Lately noted.)

Tex., Houston.—City, E. B. Bonney, Secy., will construct storm sewers on E. Eagle St. from Main to Fannin Sts.; bids until Apr. 13; E. E. Sands, City Engr. (See Machinery Wanted.)

Tex., Houston.—City let contract to Horton & Horton, Houston, to construct storm sewer on Alabama St. from Milam to San Jacinto, with manholes and connections on Fannin and San Jacinto Sts.; \$6100 appropriation; and to Horton & Horton for placing storm sewers, manholes, etc., on Louisiana, Travis, Fannin and San Jacinto Sts.; \$15,000 appropriation; to Hunter & Hunter to construct sanitary sewer on Webster St. from Hamilton to Jackson St.; \$800 appropriation. (Lately noted.)

Tex., Palacios.—E. L. Ford has franchise to install sewer system.

Tex., Wharton.—City will construct combined storm and sanitary sewer on Richmond Rd. through Gallahar's first addition to center of Caney St.; M. G. Rugeley, City Engr.; bids until Apr. 20; lately noted. (See Machinery Wanted.)

TELEPHONE SYSTEMS

Ark., Ashdown.—Southwestern Telegraph & Telephone Co. (main office, Dallas, Tex.) is reported to build plant costing \$10,000.

Ga., Savannah.—Southern Bell Telephone Co., W. T. Gentry, Prest., Atlanta, Ga., will erect annex adjoining present structure; cost about \$25,000.

Ky., Mackville.—Thompson Telephone Co. incptd. by Joe F. Thompson, J. W. Russell, J. E. Carpenter and others.

Ky., Whitesburg.—Sandlick Telephone Co. organized by Chas. H. Back, Saml. Caudill and others; build local line at Sandlick; about 15 to 20 mi.; later plan to construct lines to Colson and Hindman, Ky.

Ky., Whitesburg.—Cumberland Telephone & Telegraph Co., Atlanta, Ga., will extend telephone and telegraph lines from Hazard to Whitesburg, connecting with switchboard at Whitesburg, and on into Fleming, McRoberts, Jenkins and Haymond, Ky.

Okla., Binger.—Centerville Rural Phone Line incptd. by J. N. Arthurs of Binger, W. J. Newnum and Geo. Payton of Lookaba, Okla.

Okla., Cement.—High View Telephone Co. incptd. by C. H. Mabray and E. E. Swinney of Cement and L. E. Burr of Anadarko, Okla.

Tenn., Jamestown.—Home Telephone Co., capital stock \$1000, incptd. by D. A. Todd, J. F. Cross, W. K. Todd and C. C. Shoate.

W. Va., Logan.—Logan & Eastern Telephone Co., capital stock \$25,000, organized; P. A. Daumer, Prest.; L. Epperly, V.-P. and Gen. Mgr.; B. E. Chatfield, Secy.-Treas.

TEXTILE MILLS

Ga., Columbus.—Cotton Yarn.—Swift Spinning Mills increased capital stock from \$120,000 to \$300,000; let contract Frank A. Pierce, Columbus, to erect 3-story 117x133-ft. addition to present mill building, brick office building, two new sections of cotton warehouse and enlargement of opening-room; upon completion of addition, mill building will be 300x133 ft., 3 stories; let contract for 13,000 spindles, with complementary machinery, increasing equipment to 28,000 spindles. (Lately noted contemplating to double output.)

Ga., West Point.—Cotton Duck.—Riverdale Cotton Mills let contract Gresham Mfg. Co., Griffin, Ga., to erect \$10,000 clothroom; addition; Archt., Park A. Dallas, Atlanta. (Lately noted.)

Ky., Louisville.—Woolen Yarns.—Sterling Spinning Co., 1361 S. 15th St., organized; Geo. Dunham, Prest.; J. L. McElary, V.-P.; M. W. Brack, Secy.-Treas.; has 1-story 255x

63-ft. brick and concrete building; installing 1224 spindles, direct electric drive, etc., costing about \$12,000; daily capacity 1000 lbs. woolen yarns. (Lately noted inceptd., capital stock \$25,000, etc.)

N. C., Burlington—Ginghams, etc.—Aurora Cotton Mills will install electric motors to drive equipment of machine, finishing, dyeing and spinning departments; has ordered motors; purchase electricity locally; operates 17,862 ring spindles, 749 narrow looms, etc.

N. C., Durham—Hosiery.—Durham Hosiery Mills' contract (lately noted) to Fiske-Carter Construction Co., Greenville, S. C., calls for 2-story 410x106-ft. main mill addition and 2-story 155x100-ft. warehouse; standard mill construction; cost about \$100,000; install patented process for spinning waste yarns on first floor and 7600 spindles on second and third floors. (Recently mentioned.)

N. C., Greensboro—Blue Denims.—Proximity Mfg. Co. will install additional 200 H. P. induction electric motor; has let contract.

N. C., Kannapolis—Shirting.—Patterson Mfg. Co. will install 12 25 H. P. four-frame electric motors, with auto switches and switchboard; has let contract.

N. C., Kings Mountain—Cotton Yarns.—Cora Cotton Mills will install 6 electric motors of 40 to 125 H. P., 2 15 K. V. A. transformers, switchboard, etc., for electric drive; has let contract.

N. C., Morganton—Knit Goods.—Frank S. Drury plans to install knitting mill; erect 20x30-ft. wooden building; cost \$3000; operate machinery by 18 H. P. water-power plant; line shaft; lately noted. (See Machinery Wanted.)

N. C., Tilton—Hosiery.—Tilton & Sons are reported as to add new machinery in hosiery knitting mill.

Okl., Tishomingo—Cotton Goods.—Tishomingo Development Co., Tishomingo and Cincinnati, O., reported as interested in plan to build cotton mill; \$500,000 investment; E. E. Pendergrass of Tishomingo, Pres.

S. C., Central—Print Cloth.—Issaquena Mills will install 314 40-inch looms, replacing old narrow looms; has ordered this machinery.

S. C., Edgefield—Print Cloth.—Hampton Cotton Mills Co. will install several spinning frames; has ordered this machinery.

WATER-POWER DEVELOPMENTS

N. C., Elkin.—Carters Falls Power Co. will probably be inceptd. to build hydro-electric plant at Carters Falls, 3 mi. west of Elkin; total cost \$20,000; to include diverting dam, power-house, 3 mi. transmission system, etc., developing 200 electrical horse-power for transmission to Elkin and Jonesville; Engr., J. B. McCrary Co., Atlanta, Ga.

Tex., Cuero.—Cuero Light & Power Co., W. M. Ratcliffe, Pres., leased Guadalupe River bed; will construct 2 dams for water-power development; has 1 dam; generate electricity for light and power; has invested \$240,000 and will increase to \$400,000.

WATER-WORKS

Ark., Carlisle.—City appointed committee to plan water supply. Address The Mayor.

Ala., Mobile.—Southern Realty Corp., B. F. Adams, Secy., will construct water pipe line to supply suburban residence section.

Ala., Phenix.—City voted \$15,000 bonds to construct water-works. Address The Mayor.

Fla., Dade City.—Town is considering construction of water-works to cost about \$18,000. Address Town Clerk.

Ga., Forsyth.—Solomon-Norcross Co., Candler Bldg., Atlanta, Ga., will prepare plans to increase water supply. (Lately noted.)

Ga., Richland.—City will construct additional reservoir; let contract J. B. McCrary Co., Atlanta, Ga.

Ga., Tifton.—City votes May 12 on \$17,000 bonds for extensions and improvements to water-works. Address The Mayor. (Lately noted.)

Ky., Campbellsville.—Bell Construction Co., Box 376, Lexington, Ky., has contract to construct water-works and filter plant. (Previously noted.)

Ky., Shepherdsville.—Shepherdsville Electric Light, Water & Cold-Storage Co. is being organized with \$10,000 capital stock and S. W. Bates Pres. (See Electric Plants.)

Md., Hancock.—City voted \$30,000 bonds for water-works; lately noted having let contract at \$15,000 to \$18,000 to I. G. Robinson, Hollidaysburg, Pa., to construct water-works; reservoir 200 ft. in diameter; 10 ft. deep; contain 300,000 gals. water from 2 artesian wells; Alfred M. Quick, Engr., 725-726 Munsey Bldg., Baltimore.

Md., Mt. Rainier.—City votes April 21 on \$100,000 bonds for water-works and sewer system. Address The Mayor.

Md., Rising Sun.—Town voted on bonds to complete town water plant and for street improvements. Address Town Clerk.

Miss., Clarksdale.—A. L. Dabney, Memphis, Tenn., states is not preparing plans for water plant at Clarksdale; recent report incorrect.

N. C., Hertford.—City will vote May 5 on \$50,000 bonds for water-works, paving and street improvements, drainage and sewer system. Address The Mayor.

N. C., West Asheville, P. O. Asheville.—C. E. Waddell, Engr., submitted report on construction of water-works and sewer system; estimated cost of water-works \$30,000 and of sewer system \$14,000. (Lately noted.)

S. C., Fort Mill.—City will expend \$15,000 (bonds lately noted) to construct water system; W. B. Ardrey, Chrmn. Water Com.

Tenn., Elkmont.—Appalachian Club, Knoxville, Tenn., will enlarge water-works, sewer system and electric-light plant. (See Miscellaneous Structures.)

Tenn., Murfreesboro.—Murfreesboro Water Co., Jas. R. Jetton, Pres., acquired local water-works and will improve; inceptd. with \$100,000 capital stock.

Tenn., Springfield.—City contemplates purchasing 2 pumps for water-works; G. B. Shawver, Supt. (See Electric Plants.)

Tex., Aransas Pass.—City, Jesse J. Todd, Mayor, asks bids until May 5 for machinery and materials for previously described water-works construction; M. Griffin O'Neil & Sons, Engrs., 1505 Praetorian Bldg., Dallas, Tex. (See Electric Plants and Machinery Wanted.)

Tex., Crystal City.—City voted bonds to acquire water-works and make improvements to streets; amount available, \$21,000; W. B. Guillaudeau, Sr., Mayor.

Tex., Hillsboro.—City voted \$18,000 water-works bonds. Address The Mayor.

Tex., Milford.—City contemplates voting on bonds to construct water-works. J. M. Goldstein, Mayor.

Tex., Smithville.—E. Buescher, Propr. City Water-works, let contract to Taylor, Roberts & Co., Taylor, Tex., to bore artesian water well.

Tex., Timpson.—City, B. J. Hawthorn, Mayor, voted lately-noted \$17,000 bonds for water-works construction; engineer not engaged.

Tex., Uvalde.—Uvalde Water-works Co. will lay additional mains in outlying districts.

Va., Lynchburg.—Common Council decided to proceed with plans and specifications for auxiliary water system as follows: James River auxiliary, \$53,000; pedlar improvements, \$128,000; covering reservoirs, \$25,000; changes to gravity system, \$90,000; meters on half tap, \$15,000; incidentals, \$5000; Harry L. Shaner, City Engr. (Lately noted.)

W. Va., Newell.—Newell Water & Power Co. will install additional equipment costing \$35,000 to double capacities of water and power plants; install triple pump with daily capacity 1,000,000 gals. at water plant; erect building at power plant and install low-pressure steam turbine.

WOODWORKING PLANTS

Ark., Cotton Plant—Handles.—Cotton Plant Handle Co. organized; R. P. Sallee, Pres.; Frank Doyle, V.-P.; J. J. White, Secy.-Treas.; operate handle factory; daily capacity 110 doz. axe and pick handles; machinery installed. (Lately noted inceptd., \$6000 capital.)

Ark., Corning—Handles, etc.—W. B. Bayless Company, 440 N. Main St., Memphis, Tenn., lately noted (under "Arkansas") inceptd., capital stock \$70,000, continues established plant; W. B. Bayless, Pres.; L. M. Thompson, V.-P.; W. M. Turner, Secy.; S. W. Scott, Treas.; all of Memphis; J. H. Moses, Mgr., Corning.

Ark., Heber Springs—Silos.—Heber Sash & Door Works will install equipment to mfr. wooden silos.

Ark., Heber Springs—Flooring, etc.—E. W. Davis & Son will erect planing mill; ordinary construction; cost \$2000; machinery mainly purchased; daily capacity 10,000 ft. yellow pine flooring, ceiling, ship-lap molding, etc. (See Machinery Wanted.)

Ark., Junction City—Woodwork.—W. M. Williams will erect woodworking plant; 26x80 ft.; metal construction; install 6 or 8 H. P. gasoline engine, jointer, band saw, drill press and other small machinery; bids opened July 1; lately noted. (See Machinery Wanted.)

Ark., Malvern—Furniture Veneer.—Van Veneer Co. (H. A. Van Dusen, interested) purchased machinery at cost of \$8000 for plant to mfr. furniture veneer from oak, gum, pine and holly woods. (H. A. & H. E. Van Dusen lately noted as purchasing Purdy Cooper Chair Co. buildings, etc.)

Ga., Douglas—Excelsior.—Douglas Excelsior Co. will incorporate with capital stock \$5000; C. E. Baker, Pres.-Treas.; C. P. Mathews, Secy.-Mgr.; establish lately-noted plant; lease building; purchased machinery costing about \$3500; daily capacity, 8 to 10 tons.

Ky., Ashland—Ties.—Wm. Meade Tie Co., Meinhardt & Wurts Bldg., inceptd. with \$10,000 capital stock; Wm. Meade, Pres., Treas. and Mgr.; R. D. Davis, V.-P.; H. J. Riffe, Secy.

Ky., Clearfield—Nail Kegs, etc.—Clearfield Heading Co., capital stock \$10,000, inceptd.; G. H. Gearhart, Pres.; O. G. Snyder, V.-P.; Blaine Fulton, Secy.-Treas.; purchased Leon Stave Co.'s plant; mfr. nail kegs, barrel heading and keg staves.

Ky., Colly—Staves.—West Virginia Stave & Lumber Co., H. C. Hurst, Mgr., will establish stave mill and mfr. 10,000,000 to 12,000,000 staves.

Ky., Cornettsville—Staves.—F. C. Seaman Co., Winchester, Ky., purchased timber tract and will install stave mills.

Ky., Mayking—Wagons.—W. W. Gibson & Son organized; will erect plant to mfr. wagons; also operate blacksmith shop; W. W. Gibson, Mgr.

Miss., Meridian—Spokes.—Whitaker Bros. will build plant; erect 3 buildings—drykilns, main factory and boiler-room; construction begun.

Mo., St. Louis—Boxes.—P. Heibel & Sons Mfg. Co. purchased plant of Union Iron & Foundry Co.; will operate as box manufacturing plant in connection with present factory.

Mo., St. Louis—Furniture.—Kuchins Furniture Mfg. Co. organized; Roman Kuchinski, Pres.-Mgr.; purchased plant of E. Ernst Furniture Co.; will mfr. kitchen cabinets and other furniture. (Lately noted inceptd. with \$50,000 capital stock.)

N. C., Greensboro—Building Materials, etc. O. W. Monroe, 327 S. Elm St., will erect plant and equip to mfr. building materials, frames, etc.; building 50x50 ft.; ordinary construction, by owner. (Lately noted.)

N. C., Mt. Airy—Furniture.—Mount Airy Furniture Co. will erect addition to storage-house, doubling capacity; shed 30x200 ft.; 3 stories.

Tenn., Chattanooga—Hame and Singletrees. American Hame & Singletree Co., capital stock \$30,000, inceptd. by A. T. Holzhog, J. B. Robinson, H. C. Crumbliss, J. Read Voight and John C. Vance; to mfr. harness hames and singletrees and iron used upon them.

Tenn., Nashville—Wheels.—International Wheel Co. will build plant to mfr. automobile wheels; inceptd. with \$10,000 capital stock.

Tex., Fort Worth—Wagons.—Fort Worth Wagon Manufacturing Co., capital \$150,000, inceptd. by Marion Sansom, C. Hightower, John F. Shelton and J. W. Mitchell.

W. Va., Fairmont—Carriages.—Wm. Morris will build carriage and blacksmith shop.

FIRE DAMAGE

Ala., Athens.—Commercial Hotel, operated by Mr. Fender; loss \$11,600.

Ala., Birmingham.—Office Outfitters Co.'s building was but slightly damaged; repairs being made. (Lately reported damaged \$10,000.)

Ark., Little Rock.—Little Rock Auto Co.'s building at 311 W. 3d St.

Ark., Little Rock.—Little Rock Automobile Co.'s garage; loss \$45,000.

Ala., Millry.—McLemore & Knight's saw-mill.

Fla., Fort Meade.—Mrs. M. C. Blackburn's residence.

Fla., Pablo Beach.—Hotel Pablo, owned by Thos. Griffith; 7 dwellings owned by W. J. Foss, Philadelphia, Pa.; 4 cottages owned by estate of E. E. Marshall and Mrs. L. F. Foss; total loss \$25,000 to \$30,000.

Fla., Robinson Point.—Robinson Point Mill Co.'s plant; loss \$75,000; owned by H. H. Boyer of Pensacola, Fla., and Peter Tomasello of Robinson Point.

Ga., Canton.—Coggins Marble Co.'s plant; loss \$80,000.

Ga., Helena.—Citizens' Bank building; Helena Grocery Co.'s building; Carson & Son's building; City Drug Co.'s building; J. Friedman's building; total loss \$25,000.

Ga., Sandersville.—Mrs. D. L. Cheatham's residence; loss \$5000.

Ga., Winterville.—Pittard-Cole Company's building; loss \$5000.

Ky., Blackford.—Threlkeld Hotel; Henry Martin's restaurant; T. M. Clark's store; J. C. Vaughn & Bro.'s store; McCarthy Insurance Co.'s offices; Field Grocery Co.'s store; Litchfield Grocery Co.'s store.

Ky., Eddyville.—Hotel Gaines, owned by C. J. Gresham; loss \$10,000.

Ky., Lexington.—Sample Shoe Store, owned by estate of Richard Stoll; loss \$3000 to \$5000.

Ky., West Liberty.—T. B. Sturdivant's building; loss \$12,000.

Ky., Louisville.—Old Mission Furniture Co.'s warehouse at 753-65 S. Preston St.; loss \$10,600.

Ky., Louisville.—Schimpff-Parrott Printing Co.'s plant at 212-216 S. 7th St.; estimated loss \$3500.

Ky., Louisville.—Williams Messenger Co.'s building at 513 S. 3d St.; loss \$7000.

Ky., Salyersville.—John H. Gardner's dwelling; loss \$4000.

La., Abbeville.—P. S. Nugler's residence and barn; loss \$6000.

Md., Baltimore.—Frederick Walpert & Co.'s warehouses B and D on Taylor near 22d St.; office, 106-108 N. Gay St.; loss several thousand dollars.

Md., Federalburg.—St. Mary's Episcopal Church. Address The Rector.

Miss., Charleston.—Buildings occupied by James Delap, J. Yak & Son, Savage & Caruthers and Tallahatchie Co-operative Warehouse Co.

Miss., Long Beach.—Two residences and store building owned by W. W. Whitten.

Miss., Port Gibson.—J. W. Person's residence; loss \$4000.

Mo., Caruthersville.—Felton Opera-house; Western Union Telegraph Co.'s offices; G. W. Helm's store; loss \$40,000.

N. C., Kings Mountain.—W. A. Mauney & Bro.'s building; loss \$4000.

Okl., Tonkawa.—Oklahoma Institute of Technology's administration building; loss \$100,000; Lynn Glover, Pres.

S. C., Campobello.—Campobello Oil Mill's seedhouse; loss \$15,000.

S. C., Manning.—F. C. Thomas' stable; loss \$2000.

Tenn., Memphis.—Russe & Burgess Lumber Co.'s mill; loss \$50,000.

Tenn., Nashville.—Battle Clark's residence at 1811 Acklen Ave.; loss \$3500 to \$4000.

Tenn., Waverly.—Merchants and Farmers' Bank, loss \$5000; postoffice; Citizens' Bank, loss several thousand dollars; W. T. McCracken's buildings, loss \$7000; Telephone Exchange; G. G. Griffith's store, loss \$3600; J. R. Fowlkes' store, loss \$3000; E. C. Finch's store, loss \$3000; Hooper, Poeh & Evans' store, loss several thousand dollars.

Tex., Calvert.—Dr. Daniel Parker's residence; loss \$6000.

Tex., Corsicana.—T. G. Beckett's building, occupied by Merchants' Opera-house; Collins Furniture Store; A. W. Leverman's store.

Tex., Devine.—J. F. Burns Mercantile Co.'s 3 buildings; loss \$15,000.

Tex., Longview.—Residences of Mrs. W. P. Stewart, Mrs. R. C. Overton and Walter Stewart; loss \$10,000.

Tex., Maybank.—Knight Bros. Shoe Co.'s store and 11 other structures; loss \$100,000.

Tex., Terrell.—Buildings owned by S. G. Edwards and Dr. W. I. Swangen; loss \$5000 each.

Va., Culpeper.—Bell Bakery Co.'s plant, Woodmen of the World's building, A. L. Goodloe & Co.'s warehouse, Eclipse Theater, Culpeper Harness Co.'s buildings; total loss \$50,000.

Va., Carrsville.—Seaboard Air Line Ry. Co.'s depot; W. D. Faucette, Ch. Engr., Norfolk, Va.

Va., Lynchburg.—A. W. Terrell's residence in Rivermont; loss \$10,000.

Va., North Fork.—Claude Van Sicker's store; loss \$5000; Telephone Exchange, buildings owned by Mrs. Anna Leith and James Hicks.

Va., Ocean View.—S. B. Bragg's residence "Ridgewood," on Bay Shore R. R., near Ocean View; loss \$8000.

Va., Richmond.—Arthur M. Marston's residence at 3120 Porter St., in Woodland Heights.

Va., Windsor.—K. E. Barrett & Co.'s store; L. E. Delk's store; Mrs. L. F. Carr's residence; several warehouses and barbershop; loss \$12,000 to \$15,000.

W. Va., Charleston.—Building owned by Harrison B. Smith and occupied by Charleston Electrical Supply Co.; loss \$25,000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—Howard M. Etchison, 927 15th St. N. W., will erect apartment-house at Columbia Rd. and Belmont Rd.; 61x118 ft.; cost (without mechanical equipment) \$125,000; fireproof; slag roof; steam heat; electric lighting; electric elevators; Merrill T. Vaughn, Archt., Woodridge, D. C.; construction by owner.

Fla., Jacksonville.—W. V. Henry will erect 2-story frame apartment-house; 24x60 ft.; metal roof; cost \$3000.

Fla., St. Augustine.—Goold T. Butler, 24 Bay St., is preparing plans for 2-story apartment-house; four 5-room suites; fireproof; work to begin in about a month.

Ga., Atlanta.—G. T. R. Fraser is reported to erect apartment-house at 7th and Juniper Sts.

Ga., Savannah.—Chas. Kohler is having plans prepared by J. de Bruyn Kops, Savannah, for apartment-house, 2 stories; frame; 2 suites, each with 3 bedrooms, dining-room, pantry, kitchen, bath, etc.; tin roof; cost \$5000.

Md., Baltimore.—T. M. Webster has plans by John R. Forsythe, 224 St. Paul St., Baltimore, for apartment-house in Denmore Park; 3 stories; brick and concrete; 95x120 ft.; cost \$25,000.

Md., Baltimore.—Abell Bldg. Co. has plans by Stanislaus Russell, 2900 Clifton Ave., Baltimore, for apartment-house on 30th St. near Guilford Ave.; 3 stories; 90x112 ft.; fireproof; brick; slag roof; steam heat; electric lighting; cost (without mechanical equipment) \$35,000; construction by owner; contract for elevator let to Sedgwick Machine Co., 1409 Munsey Bldg., Baltimore.

Mo., St. Louis.—Geo. A. Harris will erect 2-story brick double flat of 4 suites of 3 rooms each, and 2-story flat of 3 rooms each; separate furnaces; electric lights; cost \$15,000.

Mo., St. Louis.—Chase Uiman has plans by Nolte & Nauman, St. Louis, for 6-story tenement-house at 444 Lindell Ave.; cost \$75,000; construction by owner.

Mo., St. Louis.—Trade Realty Co. will erect three 3-story tenement-houses at 5621 Waterman Ave. and 5761-68 Westminster St.; cost \$55,000; construction by owner.

Mo., St. Louis.—P. W. Chaney will erect 2-story tenement at 3459 Giles St.; cost \$3200.

Mo., St. Louis.—Roy F. Grannemann will erect flat on Ann Ave.

Mo., St. Louis.—Jos. M. Hacker will erect 4 and 5-room flat on St. Louis Ave.; cost \$6000.

Mo., St. Louis.—M. W. Lorenz will erect 4 two-story tenements at 3549-55 Giles Ave.; cost \$17,000.

Mo., St. Louis.—F. A. Knapstein will erect 2-story tenement-house at 3210 S. Dakota St.; cost \$5600.

Mo., St. Louis.—Henry Degenhardt will erect two 2-story tenement-houses at 4533-35-37-39 Minnesota St.; cost \$10,000.

Mo., St. Louis.—Robt. Blaetterman will erect 2 double flats of 3 rooms each on Blaine Ave.

Tex., El Paso.—White Building & Improvement Co. will erect brick tenement at Tays and Smith Sts., residence at 6th Ave. and 7th St., and brick bungalow in East El Paso; cost \$10,000.

Va., Norfolk.—S. Friedberg opened bids to erect twin apartments at Blow St. and Graydon Ave.; R. R. Richardson & Co., Norfolk, are lowest bidders at \$63,931; Neff & Thompson, Archts., Norfolk.

Va., Norfolk.—S. B. Stanfield will erect 3-story apartment-house at Westover and Greenway Sts.; cost \$30,000.

Va., Richmond.—J. D. Reynolds, 3208 Floyd Ave., will erect tenement-houses at 3208-10-12 Floyd Ave.; 60x64 ft.; ordinary construction; cost \$10,000; hot-water heat to cost \$1000; granolithic sidewalks to cost \$100; construction by owner. (Lately noted.)

ASSOCIATION AND FRATERNAL

La., Shreveport.—Ancient Free and Accepted Scottish Rite Masons will erect cathedral at Cotton and Common Sts.; E. R. Bernstein, Prest. Board of Directors, wires Manufacturers Record: "Building will be 115x130 ft.; steel frame; brick, stone and terra-cotta; 3 stories; steam heat; forced ventilation; cost of building \$125,000; Edw. F. Heild, Archt., Shreveport."

Mo., St. Louis.—A. F. and A. M. will expend \$16,000 to repair Masonic Home.

Tex., Beaumont.—Jefferson Lodge No. 55, K. of P., will erect hall on Forsythe St.; 3 or 4 stories; brick and concrete; lower floor for stores; upper floors for lodge.

Tex., Texas City.—W. H. Suttle, McKinney, Tex., will erect store and lodge building. (See Stores.)

Tex., Wichita Falls.—A. F. and A. M., R. C. Smith, Chrmn. of Comm., will erect store, office and lodge building; 50x150 ft.; 3 stories; fireproof construction; roofing not decided; cost \$40,000; architect not decided; address proposals to J. A. Rieholt. (Lately noted.)

Va., Richmond.—B. P. O. E., Wm. Perlstein, Exalted Ruler, 126 S. 5th St., contemplates erecting building; cost \$50,000; details not determined.

Va., Roanoke.—H. M. Miller, Archt., receives bids until Apr. 20 to erect Y. M. C. A. building; 50x95 ft.; 5 stories; slag roof; alternate bids on reinforced concrete structure will be considered; cost \$125,000; Louis E. Jallade, 37 Liberty St., New York, and H. M. Miller, Associate Archts., Roanoke. (Lately noted.)

BANK AND OFFICE

Ala., Opelika.—First National Bank will remodel building for banking purposes; tile floor; new fixtures; vaults, etc.; cost \$5000; Frank Lockwood, Archt., Montgomery.

Ala., Red Bay.—R. L. Nabers will erect brick office building.

Ala., Roy.—People's Bank will erect building during summer; plans not made.

Fla., Tampa.—Arguelles, Lopez & Bro. are reported erecting addition for offices.

Fla., Tampa.—Exchange National Bank opens bids about July 15 to erect bank building at 601 Franklin St.; 35x85 ft.; 2 stories; cost (without mechanical equipment) \$80,000; fireproof; concrete roof; gas heat; commercial lighting; F. J. Kennard, Archt., Tampa. (Lately noted.)

Fla., Trolley.—Trolley State Bank has plans by Tally & Summer Co., Jacksonville, for bank building; 25x52 ft.; fireproof; metal roof; electric lighting; cost \$5000; bids opened about Apr. 15 or May 1. Address W. G. DeVane.

Ga., Atlanta.—Reuben R. Arnold and Harvey Hill open bids during June to erect office building at Prior and Hunter Sts.; 52x120 ft.; 7 stories; cost (without mechanical equipment) \$120,000; fireproof; roofing not determined; vapor heat; electric (independent) plant; high-speed traction elevator; Walker & Chase, Archts., Candler Bldg., Atlanta; heating, lighting plant, elevators and wiring separate contracts. (Lately noted.)

Ky., Hazard.—Jesse Morgan and C. C. Bowman will erect stone and brick building; 88x88 ft.; 2 stories and basement; cost \$25,000; contract let within 10 days.

Ky., Irvington.—First State Bank will erect building; pressed brick.

Ky., McRoberts.—McRoberts State Bank will erect bank and office building; 2 stories and basement; 48x60 ft.; cost \$20,000.

Ky., Middlesboro.—National Bank of Middlesboro will erect building at 20th St. and Cumberland Ave.; Dr. L. L. Robertson and J. H. Keeney, Com.

Md., Cumberland.—Saml. Wertheimer will remodel building for offices, etc. (See Theaters.)

Md., Towson.—National Bank of Towson has plans by A. C. Leach, 323 N. Charles St., Baltimore, Md., for alterations and additions to bank building; contractors estimating are: Cowan Building Co., 106 W. Madison St.; Morrow Bros., Fidelity Bldg.; John Hiltz & Son, 7 Clay St.; D. M. Andrew Co., Mt. Vernon Ave. and 26th St., all of Baltimore; bids opened Apr. 14.

Mo., St. Louis.—Landay Real Estate Co. has plans by Clymer & Drischler, Walnwright Bldg., St. Louis, for office and store building. (See Stores.)

N. C., Charlotte.—E. D. Latta and J. B. Duke are reported to erect building for stores and offices. (See Stores.)

Okla., Durant.—Farmers' State Bank will erect building.

Tex., Bastrop.—Citizens' State Bank acquired site at Main and Chestnut Sts. and will erect bank building.

Tex., Dallas.—Hiram Grosman will erect 5 or 6-story structure at Commerce and Lane

Sts., instead of 2-story structure, as previously contemplated; building under construction; cost about \$75,000; Lang & Wittell, Archts., Dallas.

Tex., Dallas.—Dallas Chamber of Commerce will receive bids for 10-story building at Commerce and Poydras Sts., with alterations on 13 and 15 stories; steel frame; bids opened Apr. 14; Lang & Wittell, Archts., Dallas. (Previously fully described.)

Tex., El Paso.—Commercial Building Co., 107 Texas St., is having plans redrawn for bank and office building at Mills St. and Mesa Ave.; 14 stories; fireproof; other details not determined; open bids in about 60 days. Previously noted.)

Tex., Wichita Falls.—A. F. and A. M., R. C. Smith, Chrmn. of Comm., will erect office, store and lodge building. (See Association and Fraternal.)

Va., Broadnax.—Bank of Broadnax, T. R. Temple, Prest., will erect 20x40-ft. brick bank building; flat roof; construction May 1. (See Machinery Wanted.)

Va., Richmond.—F. P. Loth will complete interior work on 9th floor of Chamber of Commerce Bldg. at cost of \$6000.

Va., Suffolk.—Suffolk Peanut Co. will erect office building.

W. Va., Bowers.—Davis Collieries Co., Elkins, W. Va., is having plans prepared for store and office building. (See Stores.)

CHURCHES

Ala., Birmingham.—Westminster Presbyterian Church has plans by Clifford Evans, 1906 American Trust Bldg., Birmingham, for building in Norwood; Sunday-school to be erected first at cost of \$12,000; later erect auditorium; brick; concrete walls; steam heat; composition roof; seating capacity 550.

Ala., Jasper.—First Methodist Church South will erect building for auditorium and Sunday-school annex; former to seat 500, latter 300; pressed brick; stone columns; dome; probably steam heat; asbestos shingle roof; cost \$25,000; H. D. Breeding, Archt., 15 Watts Bldg., Birmingham. (Lately noted.)

Fla., Blountstown.—Methodist Church will erect brick building. Address The Pastor.

Fla., Orlando.—Baptist church has adopted plans for building; cost \$25,000. Address The Pastor.

Ga., Atlanta.—Fortified Hills Baptist Church has plans by W. C. Mendor, Atlanta, for building; brick and stone; 2 stories; cost \$20,000.

Ga., Glennville.—Baptist congregation, L. A. De Loach, Chrmn. Building Comm., will erect building; concrete and rough texture brick; art windows; seating capacity 500; cost \$8000 to \$10,000; I. P. Crutchfield, Archt., Real Estate Bank Bldg., Savannah; day labor.

Ga., Winder.—First M. E. Church has plans by Sayre & Baldwin, Anderson, S. C., for additions to building; cost \$10,000.

Ky., Fleming.—Mineral Fuel Co. will erect church building; 40x60 ft.; cost \$12,000 to \$15,000.

Ky., Middlesboro.—First Baptist Church is having plans prepared for building. Address The Pastor.

Ky., Perryville.—Presbyterian Church, Dr. W. O. Hopper, Chrmn. Building Comm., opens bids May 1 to erect building; 60x60 ft.; ordinary construction; slate roof; hot-air furnace; electric lighting; cost \$7500; Val. P. Collins, Archt., 624 Paul Jones Bldg., Louisville, Ky. (Lately noted.)

Md., Lonaconing.—Baptist church, Rev. J. P. Filson, pastor, will erect building; frame; main auditorium to seat 750 and Sunday-school room to accommodate 250 on first floor; cost \$6000 to \$7000.

Miss., Drew.—Building Comm. of Methodist Church receives bids until May 5 to erect building; plans and specifications on file with Dr. B. H. Booth, Dr. B. F. Green and J. R. Roper; plans by John M. Gaisford, Memphis, Tenn., call for brick structure; main auditorium to seat 250 and Sunday-school to seat 250; cost \$12,000. (Lately noted.)

Miss., Pontotoc.—Presbyterian Church, Rev. F. D. Daniel, pastor, will erect building.

Mo., Kansas City.—Linwood Boulevard Christian Church, Linwood Blvd. and Forest Ave., has plans for addition to building; 1 story; brick; cut-stone trimmings; 120x70 ft.; cost \$40,000. Address The Pastor.

N. C., Henderson.—First M. E. Church has plans by Sayre & Baldwin, Bleckley Bldg., Anderson, S. C., for building; cost \$30,000.

N. C., High Point.—Methodist church will erect building on Main St.; cost \$65,000. Address The Pastor.

N. C., Raleigh.—First Presbyterian Church will erect additional building for classrooms;

cost \$15,000; A. A. Thompson, Chrmn. of Building Com.

N. C., Winston-Salem.—Fourth Street Christian Church, Rev. C. Manly Morton, pastor, is having plans prepared by W. C. Northrup, Winston-Salem, for improvements to building.

Tenn., Maryville.—Baptist church has adopted plans for building; cost \$30,000. Address The Pastor.

Tex., Ennis.—Christian Tabernacle will erect \$15,000 building. Address The Pastor.

Tex., Texarkana.—Rose Hill Baptist Church will expend \$20,000 to erect building; 65x127 ft.; ordinary construction; Johns-Manville roofing; Witt, Seibert & Co., Archts., Texarkana. (Lately noted to receive bids until Apr. 15.)

Tex., Victoria.—Presbyterian church, C. S. E. Holland, Chrmn. of Building Com., has plans by Hull & Praeger, Victoria, for building and manse; cost (without mechanical equipment) \$35,000; ordinary construction; asbestos shingle and Barrett's 5-ply tar and gravel roof; steam heat; indirect lighting; terra-cotta cornice and columns; terrazzo, face brick and rolling partitions; plans ready in about 4 weeks.

Va., Richmond.—Cowardin Ave. Christian Church plans to erect annex to Sunday-school building. Address The Pastor.

W. Va., Moundsville.—Christian church is having plans prepared by D. T. Burton, Moundsville, for addition to building; brick and wood; 41x51 ft.; balcony around Sunday-school room.

W. Va., Wheeling.—First English Lutheran Church is having plans prepared by Fred F. Paris, Wheeling, for building.

CITY AND COUNTY

Ala., Evergreen.—Jail.—Concuh County Commrs. have plans by Frank Lockwood, Montgomery, Ala., for jail; steel work, etc.; bids received until Apr. 7.

Ga., Columbus.—Fair Buildings.—City contemplates voting on \$50,000 bonds for fair buildings. Address The Mayor.

Ga., Rome.—Home.—Floyd County Commrs. will not let contract to erect county home, but will select supervising contractor; has \$10,000 appropriation; will purchase several movable iron cages for county convict camps, to be purchased from Manly Jail Works, Dalton, Ga. (Lately noted.)

Ga., Tifton.—City Hall and Fire Department.—City votes May 12 on \$8000 bonds for city hall and fire department. (See Schools.)

Ky., Henderson.—Sanatorium.—Henderson County Commrs. plan to erect tuberculosis sanatorium; cost about \$10,000.

Md., Baltimore.—Ward Building.—Board of Awards, John Hubert, Act. Prest., receives bids at office of Richard Gwinn, City Registrar, City Hall, until Apr. 22 to erect Ward B building at Sydenham Hospital; plans and specifications at office of C. E. Stubbs, Inspector of Buildings, City Hall; plans by Theodore Wells Pietsch, American Bldg., Baltimore, call for 1-story structure with accommodations for 15 to 20 patients and cost about \$25,000. (Lately noted.)

Mo., Kirkwood.—City Hall, etc.—City voted \$15,000 bonds to purchase and remodel city hall and jail; J. R. Matthews, Mayor. (Lately noted.)

Mo., Leeds.—Reformatory.—City of Kansas City, Mo., has plans for municipal farm building near Leeds; 50x27 ft.; 2 stories and basement; kitchen, laundry and sewing-room in basement; accommodations for 50 women; Mrs. Louisa Doehler, Supt.

N. C., High Point.—Engine-house.—City will erect fire-engine house at Rankin and Commerce Sts. Address The Mayor.

N. C., Graham.—Jail.—Alamance County Commrs. will erect jail; W. H. Turrentine, R. N. Cook and Geo. T. Williamson, Comm.

Okla., Idabel.—Jail, etc.—McCurtain County Commrs. are considering election on \$100,000 bonds to erect jail and courthouse. Address County Commrs.

S. C., Ridgeland.—Jail.—Jasper County Commrs. ordered election for May 5 on \$40,000 bonds to erect courthouse and jail.

Tenn., Jackson.—City Hall.—City Hall and Calaboose Com., J. M. Glenn, Chrmn., approved plans to remodel city hall at cost of \$5000.

Tenn., Nashville.—Hospital.—Davidson County Commrs. will erect isolation hospital.

Va., Alexandria.—Fire Station.—City rejected all bids to erect building for Relief Hook and Ladder Company, and will have City Engr. Dunn modify plans and call for new bids. (Lately noted.)

Va., Richmond.—Resthouses.—City rejected bids to erect resthouses in Wm. Bird and

Chimborazo parks; Carneal & Johnston, Archts., Richmond. (Lately noted.)

Va., Roanoke.—City Hall and Courthouse. City has plans by Frye & Chesterman, Roanoke, for city hall and courthouse; granite base; upper portion terra-cotta or stone; 220x50 ft., with central wing 75x40 ft.; vaults on ground floor; police court and detention cells in rear of vaults; cost \$250,000. (Lately noted.)

COURTHOUSES

Ga., Alamo.—Wheeler County Commrs., J. F. Sikes, Chmn., are having plans prepared by E. C. Horsford, Eastman, Ga., for courthouse; cost \$30,000; plans ready May 5; bids received June 2.

La., St. Bernard.—Police Jury of St. Bernard Parish receives bids until May 11 to erect courthouse at Terre-aux-Boeufs; plans and specifications at office of Toledano & Wogan, Archts., 1000-1001 Parlin Bldg., New Orleans. (Lately noted.)

N. C., Newbern.—Craven County Commrs. plan to expend \$10,000 to alter courthouse; propose to convert several offices into fire-proof vaults, fit new vaults with steel cases, convert ante-room hall into offices, provide room in basement of each side of building 20x40 ft., with concrete floors, for waiting-rooms, toilet-rooms, etc.

Okla., Idabel.—McCurtain County Commrs. are considering election on \$100,000 bonds to erect courthouse and jail. Address County Commrs.

S. C., Ridgeland.—Jasper County Commrs. ordered election for May 5 on \$40,000 bonds to erect courthouse and jail.

Tenn., Winchester.—Franklin County Commissioners will consider plans and bids to remodel courthouse and also to erect new structure.

Va., Roanoke.—City has plans by Frye & Chesterman, Roanoke, for city hall and courthouse. (See City and County.)

DWELLINGS

Ala., Birmingham.—E. Morris, 1229 36th St. N., will erect residence; frame; hardwood floors; furnace heat; cost \$6000; H. D. Breeding, Archt., 15 Watts Bldg., Birmingham.

Ala., Birmingham.—Harry Waters will erect 2-story frame dwelling on 32d St.; cost \$1000.

Ala., Birmingham.—Zell Gaston will erect 2-story brick-veneer residence on Milner Heights; cost \$7000.

Ala., Birmingham.—W. B. Britton will erect 2-story brick-veneer dwelling at 4131 31st St.; cost \$3500.

Ark., Brinkley.—M. B. Converse has plans by John Gaisford, Memphis, for \$4000 bungalow.

Ala., Clio.—J. E. Brown will erect 7-room residence.

Ala., Evergreen.—Edw. A. Beaven will erect residence; frame; cost \$3000; Smith & Carter, Archts., Montgomery, Ala.; day labor.

Ala., Montgomery.—Dr. Baird will enlarge residence by erection of several rooms and porch; cost \$3000; Frank Lockwood, Archt., Montgomery.

Ala., Montgomery.—O. O. Nelson plans to erect 2 residences in addition to 2 \$4000 now under construction.

Ala., Montgomery.—T. F. James has plans by Frank Lockwood, Montgomery, for residence; brick veneer; 2 stories; hot-water heat; tile roof; hardwood floors; tiled bathrooms; cost \$7500.

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., will erect 2-story dwelling at 107 10th St. N. E.; cost \$3200.

D. C., Washington.—E. J. De Lacy, 64 Rhode Island Ave. N. E., has plans by C. E. Webb, 237 Rhode Island Ave. N. W., Washington, to erect 2-story brick dwelling at 214 V St. N. W.; cost \$3000; construction by owner.

D. C., Washington.—E. M. Dulin, 1270 New Hampshire Ave. N. W., has plans by A. E. Landvoigt, 1338 G St. N. W., Washington, for 2-story brick dwelling at 1635 Vermont Ave.; cost \$3500; construction by owner.

D. C., Washington.—H. B. White, 6400 Georgia Ave. N. W., will erect 2-story frame dwelling at 6400 Georgia Ave.; cost \$4000.

D. C., Washington.—Nathan C. Wyeth, 1517 H St. N. W., will expend \$8000 to remodel residence at 2022 R St. N. W.

Fla., Auburndale.—I. G. Tolerton will erect number of residences.

Fla., Eau Gallie.—S. Thruston Ballard, Louisville, Ky., will erect residence.

Fla., Daytona Beach.—E. L. King, Wynona, Minn., purchased tract of land on Halifax River from Halifax Land Co.; plans to erect residence to cost \$60,000; S. H. Gove in charge of building.

Fla., Plant City.—Rev. A. L. Brunson, Lakeland, Fla., will erect 4 two and 2 one-story residences to replace burned structures.

Fla., St. Augustine.—Goold T. Butler, 21 Bay St., will erect brick or stone bungalow; tile or other fireproof roof; cost \$5700. (Lately noted burned.)

Fla., St. Augustine.—Miss Lizzie Smith is having estimate prepared by Goold T. Butler, 24 Bay St., St. Augustine, for residence to cost about \$5300 to replace burned structure. (Lately noted burned.)

Fla., St. Augustine.—B. Joseph is having estimate prepared by Goold T. Butler, 24 Bay St., St. Augustine, for residence to cost about \$45,000. (Lately noted burned.)

Fla., St. Augustine.—C. Rogers is having estimate prepared by Goold T. Butler, 24 Bay St., St. Augustine, for residence to cost about \$4300 to replace burned structure.

Fla., Tallahassee.—H. V. Maund will erect 2 residences.

Fla., Tampa.—Mrs. W. W. De Hart will erect \$4500 residence.

Fla., Tampa.—S. R. Waters will erect \$7500 residence.

Fla., Tampa.—D. C. Walker will erect 3 dwellings on Willow Ave.; cost \$11,500; construction by owner.

Fla., Tampa.—W. J. Chambers will erect 2 residence on Boulevard; cost \$3300.

Ga., Atlanta.—J. E. Jones will erect 3 frame dwellings at 14-18 22 Dalton St.; cost \$4500; day labor.

Ga., Augusta.—Wm. E. Andrews will erect 2-story residence at McDowell and Glenn Sts.; cost \$4050.

Ga., Augusta.—Alexander & Steiner will erect 1-story residence on Walton Way.

Ga., Augusta.—E. S. Clark will erect 2-story residence on McDowell St.

Ga., Augusta.—Mrs. Lucy L. Tinker of New York is reported to erect bungalow.

Ga., Augusta.—T. P. McArdle will erect 2-story residence at Central Ave. and Winter St.; cost \$3050.

Ga., Decatur.—Jas. Heaton, Prest. Chelsea Land Co., will erect residence; 8 rooms; brick; slate roof; cost \$5000; cost of lighting \$200; architect not selected.

Ga., Fort Valley.—J. D. Fagan will erect residence; cost \$5000 to \$6000; Hupp & Shelverton, Archts., Fourth National Bank Bldg., Macon, Ga.; bids being received.

Ky., Irvington.—Ed F. Alexander will erect store and dwelling. (See Stores.)

Ky., Lexington.—E. A. Ford will erect 2 six-room cottages on Clay Ave.; cost \$4000.

Ky., Louisville.—L. Jacobson will erect 9 frame dwellings on Dulany Pl.; cost \$13,500.

Ky., Louisville.—C. R. Boswell will erect 4 frame dwellings at 721-23 S. 32d St.; cost \$8000.

Ky., Louisville.—Consolidated Realty Co. will erect 2-story brick dwelling at 104 Hillcrest Ave.; cost \$3500.

Ky., Louisville.—C. R. Dinwiddie, 198 Pennsylvania Ave., will erect residence; 30x37 ft.; mill construction; tile, slate or asbestos shingle roof; furnace heat to cost \$150; electric lighting; plans and construction by owner; subcontracts will include roofing, plumbing, electric work and fixtures, and plastering. (Lately noted.)

Ky., Louisville.—Consolidated Realty Co. will erect 2-story brick dwelling at 104 Hillcrest Ave.; cost \$3500.

Ky., Thornton.—John S. Webb will erect 2-story 6-room dwelling; frame; cost \$3000.

Md., Baltimore.—James A. Bealmer & Son Co., 1108 Fidelity Bldg., is having plans prepared for 27 dwellings on Falls Rd.

Md., Baltimore.—J. H. Urner, 111 E. Baltimore St., has plans by Edw. L. Palmer, Jr., 408 Roland Ave., Roland Park, Md., for dwelling at Guilford; contractors estimating are Roland Park Co., Munsey Bldg., Baltimore, and Roland Park, Md.; W. E. Harn Co., 213 N. Calvert St.; G. Walter Tovell, Eutaw and Dolphin Sts.; Gladfelter & Chambers, 2074 Woodberry Ave.; E. G. Turner, Bateman Ave., all of Baltimore; plans call for 2½-story structure; brick and stucco.

Md., Baltimore.—Reliance Realty Co., Falls Rd. near Merrymans Ave., has plans by Callis & Callis, 2055 Kennedy Ave., Baltimore, for 13 dwellings at 4120-44 Falls Rd.; 2 stories; 15x45 and 14x44 ft.; tin roof; furnace heat; cost \$23,000; construction by owner.

Md., Baltimore.—Walter Westphal, 1700 N. Bond St., has plans by Wm. H. Hogg, 3200 Fairmount Ave., Baltimore, for 41 dwellings on Westwood Ave., Smallwood St. and Presbury St.; 2 stories; iron-spot brick; cost \$67,400.

Md., Baltimore.—T. Frank Wilhelm, 728 Roland Ave., opens bids May 1 to erect residence; 30x55 ft.; frame; cost \$5000; slate roof; hot-air or hot-water heat to cost \$175 to \$500; cost of lighting \$175.

Maryland.—Clarence Stone of Maryland Casualty Co., Baltimore St. and Guilford Ave., acquired site on south side of Magothy River and will erect bungalow.

Md., Brooklyn.—Brooklyn Methodist Church will erect parsonage. Address The Pastor.

Md., Roland Park.—N. E. Byrd has plans by E. L. Palmer, Jr., 408 Roland Ave., Roland Park, for residence; contractors estimating are Roland Park Co., Munsey Bldg., Baltimore, and Roland Park, Md.; E. G. Turner, Bateman Ave.; Raymond Chambers, 2074 Woodberry Ave., all of Baltimore.

Md., Ruxton.—Stuart Olivier, Gen. Mgr. Baltimore News, Calvert and Fayette Sts., Baltimore, Md., will rebuild residence reported burned at loss of \$35,000.

Md., Towson.—E. Fell Brown will erect residence.

Mo., St. Louis.—Fortune Jean Barles will erect bungalow on Forest Ave.

Mo., St. Louis.—J. G. Gruelich Realty Co. will erect five 1-story dwellings; cost \$10,000; construction by owner.

Mo., St. Louis.—Leisner Realty Co. will erect five 1-story dwellings at 3415-25 Minnesota St.; cost \$10,000; construction by owner.

Mo., St. Louis.—J. D. Rouse, 1725 Marcus Ave., will expend \$3600 to erect dwellings; 26x31 ft.; ordinary construction; composition roof; hot-water heat; electric lighting; construction by owner. (Lately noted.)

Mo., St. Louis.—Jos. Pulitzer, Jr., Prest. of Pulitzer Pub. Co., will erect residence on Barnes Rd. near Clayton Rd.

Mo., St. Louis.—Henry Dilschneider will erect two 2-room dwellings at 3843-73 Lafayette Ave.; brick; slate roofs; hot-water apparatus; tile baths; hardwood floor; cost \$11,000.

Mo., St. Louis.—W. Albert Franz will erect 3-story brick and stone dwelling at Westminster Pl. and Rosedale Ave.

Mo., St. Louis.—Jas. H. Williamson will erect 2-story dwelling at 5934 DeGiverville Ave.; cost \$4000.

Mo., St. Louis.—Mrs. Daniel H. Clark is having plans prepared for residence on Berlin Ave.

Mo., St. Louis.—Charles Gerber will erect 2-story store and dwelling at 820 N. 1st St.; cost \$4000.

N. C., Kenley.—J. C. Boleman has plans by Sayre & Baldwin, Bleckley Bldg., Anderson, S. C., for dwelling; cost \$3000.

N. C., Smithfield.—E. O. Aycock has plans by Sayre & Baldwin, Bleckley Bldg., Anderson, S. C., for dwelling; cost \$4000.

N. C., Springfield.—F. K. Broadhurst has plans by Sayre & Baldwin, Bleckley Bldg., Anderson, S. C., for dwelling; cost \$10,000.

N. C., Winston-Salem.—Jos. Perryman will erect dwelling.

N. C., Winston-Salem.—Rufus E. Shore is having plans prepared by D. Hall Grews, Winston-Salem for dwelling; mill construction; cost \$5000.

Okla., Oklahoma City.—Baron C. Housel has plans by Stewart & Wilderson, 4th floor American National Bank Bldg., Oklahoma City, for dwelling; frame; cost \$4500.

Okla., Oklahoma City.—Edward Marshall has plans by Stewart & Wilderson, 4th floor American National Bank Bldg., Oklahoma City, for frame residence; cost \$3000.

Okla., Oklahoma City.—Frederick B. Owen has plans by Stewart & Wilderson, 4th floor American National Bank Bldg., Oklahoma City, for dwelling; cost \$6000.

Okla., Oklahoma City.—J. A. Forsman has plans by Stewart & Wilderson, 4th floor American National Bank Bldg., Oklahoma City, for dwelling; frame; cost \$5000.

Okla., Oklahoma City.—J. B. Barnes has plans by Stewart & Wilderson, 4th floor American National Bank Bldg., Oklahoma City, for brick residence; cost \$7000.

Okla., Tulsa.—L. C. Wells will erect two 1-story residences on W. 3d St.; cost \$3000.

Okla., Tulsa.—R. D. Marr will erect 2-story frame residence at 1507 S. Cheyenne Ave.; cost \$3000.

S. C., Anderson.—M. P. Orr has plans by Sayre & Baldwin, Bleckley Bldg., Anderson, for residence; cost \$6000.

S. C., Starr.—C. C. Jones has plans by Sayre & Baldwin, Bleckley Bldg., Anderson, S. C., for residence; cost \$4000.

Tenn., Martin.—T. J. Taylor will rebuild residence; 8 rooms; cost \$3500; construction about June. (Lately noted burned.)

Tenn., Memphis.—J. G. Nowlin will erect two 1-story 5-room frame dwellings at 2022 and 2028 Walker Ave.; cost \$4000.

Tenn., Memphis.—Henry Brennan will erect 2 residences at 1672-76 Foster St.; cost \$500.

Tenn., Memphis.—G. T. Brodnax has plans by John Gaisford, Memphis, for residence on South Parkway; frontage 140 ft.; lower portion stone; upper portion pebble-dash effect over stucco; hollow tile walls; 3 bathrooms; sleeping porch; thatched roof effect; cost \$30,000; construction to begin May 1.

Tenn., Nashville.—Kean & Gallagher have plans by Harry J. Frahn, Nashville, for bungalow; 8 rooms; tapestry brick; stone trimmings; composition roof; hardwood interior finish.

Tex., Dallas.—Jno. R. Swain and others will erect 14-room 2-story frame residence at 300 Fairmount St.; cost \$6000.

Tex., Dallas.—A. J. Knight will erect 2-story 10-room frame residence at 4618 Swiss St.; cost \$4800.

Tex., Dallas.—Leon N. Holsombach will erect 7-room frame cottage at 107 Windomere Ave.; cost \$3000.

Tex., Dallas.—John M. Rally will erect 10-room 2-story frame residence at 615 W. 5th St.; cost \$3000.

Tex., Dallas.—John L. Greenfield will erect 2-story 8-room frame residence at 2434 Grand St.; cost \$4000.

Tex., Dallas.—M. K. Hurst will erect 12-room 2-story brick-veneer residence at 2129 Forest St.; cost \$8425.

Tex., Dallas.—M. M. Layden will erect 6-room tile and concrete building at 3465 Gillespie St.; cost \$3000.

Tex., El Paso.—Neel Cassidy Building Co. will erect 2 brick bungalows in Bassett's addition; cost \$6000.

Tex., El Paso.—Hawkins Improvement Co. will erect brick bungalow in E. El Paso; cost \$3000.

Tex., El Paso.—Phoenix-El Paso Co. will erect 3 brick bungalows in E. El Paso; cost \$3000.

Tex., El Paso.—Perry-Kirkpatrick Co. will erect brick residence at Sunset Heights; cost \$6000.

Tex., El Paso.—Ramey Bros. will erect 2 brick bungalows in E. El Paso; cost \$6000.

Tex., Fort Worth.—D. C. Webb, Jr., has plans by Field & Clarkson, 601 Wheat Bldg., Fort Worth, for dwelling; cost \$5000.

Tex., Fort Worth.—H. T. Compton has plans by Field & Clarkson, 601 Wheat Bldg., Fort Worth, for dwelling; brick veneer; hardwood floors; furnace heat; cost \$10,000; let contract soon.

Tex., Fort Worth.—Jno. C. Ryan, Jr., has plans by Field & Clarkson, 601 Wheat Bldg., Fort Worth, for dwelling; cost \$6000.

Tex., Fort Worth.—S. B. Caney has plans by Field & Clarkson, 601 Wheat Bldg., Fort Worth, for dwelling; cost \$6000.

Tex., Fort Worth.—W. P. Gage has plans by Field & Clarkson, 601 Wheat Bldg., Fort Worth, for dwelling; cost \$9000.

Tex., Hillsboro.—Marvin Lowell has plans by J. O. Galbraith, Hillsboro, for residence; 2 stories; 8 rooms.

Tex., Houston.—F. J. Marette will erect 2-story residence on Oxford St.

Tex., Houston.—S. B. Dabney will erect stucco residence on Lovett Blvd.

Tex., San Antonio.—J. H. Weymouth will erect three 4, 5 and 6-room dwellings on Weymouth Ave.; cost \$3200.

Tex., Weatherford.—R. W. Davis has plans by Field & Clarkson, 601 Wheat Bldg., Fort Worth, for dwelling; cost \$10,000.

Tex., Itasca.—F. P. Files has plans by Field & Clarkson, 601 Wheat Bldg., Fort Worth, Tex., for dwelling; cost \$8000.

Tex., San Antonio.—W. G. Tobin will erect dining-room addition to residence; 40x40 ft.; carved stone; tile floors; beamed ceiling; cost \$5000.

Tex., Victoria.—Presbyterian church, C. S. E. Holland, Chmn. of Building Com., has plans for manse, etc. (See Churches.)

Tex., Waco.—Church of the Assumption has plans by E. H. Reed, Waco, for parochial residence at 9th and Columbus Sts.; cost \$10,000; construction to begin about May 1. (Previously noted.)

Va., Graham.—B. Gilardi will erect brick residence on Highland Ave.

Va., Graham.—J. Stowers will erect dwelling on Tazewell Ave.

Va., Newport News.—W. C. Simpson will erect 2-story frame dwelling on 56th St.; cost \$5000.

Va., Norfolk.—Isaac T. Walke has plans by Ferguson, Calrow & Taylor, Norfolk, for residence; brick and frame; 80x40 ft.

Va., Norfolk.—W. W. Chamberlain will erect 2-story residence in Warren Crescent; cost \$4000.

Va., Richmond.—S. G. Meredith will erect 4 brick dwellings on Main St.; cost \$14,000.

Va., Richmond.—A. C. Houston will erect brick dwelling on Linden St.; cost \$4000.

Va., Richmond.—Blanche E. Ellis will erect two 2-story frame dwellings on 34th St.; cost \$3000.

Va., Richmond.—E. F. Poindexter, R. F. D. No. 2, Box 100, will erect 8 two-story brick dwellings at Elm and Chaffin Sts.; cost \$16,000; 20x60 ft.; mill construction; tin roof; Latrobe stoves; cost of lighting \$60; cement sidewalks to cost \$50; plans and construction by owner; contract for brick work let.

Va., Roanoke.—Century Realty Co. will erect 2-story brick-cased dwelling at Commerce St. and Walnut Ave.; cost \$10,000.

Va., Roanoke.—T. W. Hudson will erect 2-story brick-cased dwelling on 7th Ave.; cost \$3500.

Va., Roanoke.—W. B. Murry will erect two 2-story dwellings on Woodland Ave.; cost \$3000.

Va., Roanoke.—L. B. Rhodes will erect residence on Virginia Ave., Crystal Spring; 2 stories; brick, frame work and shingles; 8 rooms, 2 baths, halls and servants' quarters.

W. Va., Warwood.—Samuel Teamen, Wheeling, will erect residence at 18th St. and Richland Ave.

GOVERNMENT AND STATE

Fla., Pensacola.—Laboratory.—State Board of Health, Jacksonville, receives plans and specifications until May meeting (extended date) for laboratory and office building; concrete and brick; colonial style; cost not to exceed \$15,000; further information from State Health Officer, Jacksonville, and Dr. S. R. Mallory, Pensacola. (Lately noted.)

Id., Elkon.—Armory.—Company E, Maryland National Guard, will erect armory.

Mo., Tipton.—Home.—Board of Managers of State Home for Incurable Negro Girls has plans by M. Fred Bell for proposed home; fireproof; 135x66 ft.; front and rear porches; cost \$89,000.

S. C., Columbia.—Dispensary.—Dr. L. B. Owens is erecting buildings to be occupied by Richland County Dispensary. (See Warehouses.)

Va., Front Royal.—Reservation Buildings.—Constructing Quartermaster, Remount Depot, receives bids in triplicate until May 15 to construct following buildings on reservation, including steam heat, electric lights and plumbing: Barrack; administration building and storehouse; commanding officer's quarters; 2 junior officers' quarters; veterinarian's quarters; 2 double N. C. O. quarters; dispensary; 3 colt stables; wagon shed; shop building; veterinary storehouse; subsoil drainage system; plans and specifications on application.

HOTELS

Ark., Brinkley.—Gus Rusher, Prop. of Arlington Hotel, will erect 3-story hotel to replace burned structure; cost \$30,000.

Fla., Fort Myers.—J. E. Hendry, Sr., will erect building at 1st and Jackson Sts.; brick; 5 stories; elevator service; cost about \$40,000; lower floor for business purposes; upper floors, hotel apartments.

Fla., St. Petersburg.—C. Countryman, owner Arcade Hotel, has plans by Edgar Fardon, St. Petersburg, for improvements to 40x100-ft. 3-story hotel and erection of additional story; mill construction; gravel roof; steam heat (already installed); electric lighting; cost \$5000; partly day labor and partly contract. (Lately noted.)

Fla., Tampa.—J. L. Tallevast, It is reported, deferred indefinitely plan to erect addition to Hillsborough Hotel, and will erect hotel at Lafayette and Tampa Sts.; 6 to 10 stories. (Lately noted awarding contract for addition to hotel.)

Fla., West Palm Beach.—M. J. Hoenig, Niagara Falls, N. Y., will erect addition to Palms Hotel; 50 rooms; concrete and frame; hot-water heat; electric lighting; install elevator; cost (without mechanical equipment) \$25,000; construction under supervision of owner; lately noted. (See Machinery Wanted.)

Ky., Chp.—M. Davis will erect hotel; frame; 70x90 ft.; 2 stories; cost \$5000.

Ky., Lexington.—Phoenix Hotel Co. has plans by Richards, McCarty & Bulford, Hartman Bldg., Columbus, O., for addition to

hotel; work will include 6 additional stories on rear section of building; 48x90 ft.; fireproof; steel columns, beams and concrete slabs, etc., work beginning with 4th floor; ornamental cast iron and glass marquee at main entrance extending out about 20 ft.; remodeling section of present basement for grillroom, kitchen, etc.; plans ready for bids; estimates to be in Apr. 30. (Lately noted.)

Mo., St. Louis.—C. C. Nicholls, Jr., will erect hotel on Olive St. near Grand Ave. for client; fireproof; Italian renaissance; cream-colored matt brick, trimmed with polychrome terra-cotta; marquee over sidewalk; corridor with walls and ceiling of cressian walnut; western portion of ground floor for stores, etc.; taproom finished in Caen stone and colored tiles; 175 sleeping-rooms, with private baths; Preston J. Bradshaw, Archt., St. Louis. (Lately noted.)

Mo., Kansas City.—Muehlebach Hotel is receiving bids through Holabird & Roche, Archts., Monroe Bldg., Chicago, to erect hotel; 12 stories; 500 rooms; steel frame; tile and concrete floors; cost \$1,000,000; Norton Bros., Kansas City, excavating Contrs. (Lately noted to receive bids until Apr. 2.)

N. C., Askin.—Chautauqua Mineral Springs Co. will erect proposed hotel at Chautauqua Springs, near Askin Station; 2 stories; also erect pavilion, elevated boardwalk, etc.

N. C., Gastonia.—C. B. Armstrong and R. B. Babington are reported organizing company to erect hotel; 40 to 50 rooms; cost \$60,000 to \$75,000.

N. C., Henderson.—Vance Hotel has plans by Sayre & Baldwin, Bleckley Bldg., Anderson, S. C., for additions to hotel; cost \$20,000.

N. C., Pinehurst.—Carolina Hotel will erect addition to hotel; 65 rooms; 4 stories; 41x180 ft.; cost \$75,000.

N. C., Raleigh.—Yarborough House has plans by Frank K. Thompson, Raleigh, for addition to hotel.

N. C., Southern Pines.—Miss E. Thompson, owner and manager of the Bermaken, Kennerma, Mass., is reported to have acquired E. M. Fulton residence of 14 rooms; remodel, erect 20 additional rooms and operate as Cedar-Pines Villa with accommodations for 35 to 40 guests.

S. C., Spartanburg.—John N. Cudd and Ben Hill Brown are reported to remodel Argyle Hotel on East Main St.

Tex., Palestine.—Palestine Hotel Co. has plans by H. T. Phelps, San Antonio, Tex., for hotel; 78 rooms; fireproof; cost (exclusive of ground and furnishings) \$75,000; construction June 1. (Previously noted.)

MISCELLANEOUS

Ala., Birmingham.—Billiard Parlors.—R. D. Burnett is reported to expend \$35,000 to arrange billiard parlors in Henly Bldg.; 50x140 ft.; extend marquee 50 ft.; front of steel beams; storeroom in center, 30x20 ft.; entrance to billiard parlor 8 ft. high in white Tennessee marble; solid mahogany beams and wainscoting, arrow lock cork floor; indirect lighting; marble fixtures; provide lavatories; cost \$5000.

Ark., Harrison.—Market.—Jeff Wood, Mgr. of Harrison Produce Co., is reported to erect store and market. (See Stores.)

Ark., Little Rock.—Turnverein.—Little Rock Turnverein, A. Karcher, Pres., has plans by Wm. Dill, Little Rock, for building to replace burned structure. (Lately noted.)

Fla., Perry.—Stable.—Johnson & Lipscomb will erect livery stable.

Ky., Louisville.—Armory.—Fred W. Keisker, Pres. of Louisville Saengerfest Assn., Inc., receives bids until Apr. 21 for construction of seats, platforms, boxes, etc., in Armory; plans and specifications at office of Brinton B. Davis, Archt., 1909-2012 Inter-Southern Bldg., Louisville.

Mo., Kansas City.—Hospital.—Sisters of St. Joseph are having plans prepared by Wilder & Wight, First National Bank Bldg., Kansas City, for hospital building on tract bounded by Linwood Blvd., Prospect Ave., 31st and Wabash Ave.; 7 stories; accommodation for 250 beds; exterior brick and terra-cotta; fireproof; cost about \$400,000. (Lately noted.)

Mo., St. Louis.—Greenhouse.—Otto Koenig will erect 1-story greenhouse; cost \$4000.

N. C., Askin.—Pavilion.—Chautauqua Mineral Springs Co. will erect pavilion, etc. (See Hotels.)

N. C., Asheville.—Sanitarium.—Drs. Chas. L. Minor and Wm. L. Dunn are reported to establish sanitarium on Mt. Pleasant to cost ultimately \$250,000; will first erect 3 main structures, including administration building, main building and reception hospital; erect cottages for private patients later;

accommodations for 150; buildings of fireproof construction; will construct drives, walks, etc.; Dr. Minor wire Manufacturers Record: "Not as yet in position to give information."

N. C., Asheville.—Fair.—Western North Carolina Fair Assn. is reported to issue \$25,000 bonds to acquire site, erect buildings, etc., for fair; F. Stikelather, W. C. Colle and others, Com.

S. C., Columbia.—Stables.—Dr. L. B. Owens is erecting stables and sheds, etc. (See Warehouses.)

S. C., Spartanburg.—Market.—Arch B. Calvert, Pres. of Bank of Spartanburg, and others are reported as to convert building of Morgan Iron Works into central market with concrete floor, accommodations for 21 stalls, etc.

Va., Alexandria.—Historic Museum.—Robt. S. Barrett and others, are reported to have acquired southern wing of Braddock House and Carlyle House and to restore for historic museum.

Va., Lynchburg.—Clubhouse.—Oakwood Country Club, Giles H. Miller, Pres., will let contract about May 1 to erect clubhouse; 104x138 ft.; cost \$20,000; ordinary construction; shingle roof; hot-air heat to cost \$1000; electric lighting; J. M. B. Lewis, Archt., Lynchburg. (Lately noted.)

Va., Newport.—Hospital.—General Hospital Trustees are reported having plans prepared by E. T. Kerr, Newport News, for hospital. (Previously noted.)

RAILWAY STATIONS, SHEDS, ETC.

Fla., Green Cove Springs.—Atlantic Coast Line Ry. Co., E. B. Pleasants, Ch. Engr., Wilmington, N. C., will erect depot with umbrella sheds, etc.; cost about \$25,000.

Ky., Lagrange.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, will erect depot; brick and stucco; red tile roof; furnace heat; electric lights; cost \$7295.

Ky., Mayking.—Louisville & Nashville R. R. Co., W. H. Courtenay, Ch. Engr., Louisville, will erect depots at Mayking and Kona.

Ky., Kona (not a postoffice).—Louisville & Nashville R. R. Co., W. H. Courtenay, Ch. Engr., Louisville, will erect depots at Mayking and Kona.

S. C., Greenwood.—Seaboard Air Line Ry. Co., W. D. Faucette, Ch. Engr., Norfolk, Va., is reported to erect cotton platform with capacity for 1500 bales of cotton.

N. C., Rose Hill.—Atlantic Coast Line Ry. Co., E. B. Pleasants, Ch. Engr., Wilmington, N. C., will erect depot; cost \$4000.

SCHOOLS

Fla., Fruitland Park.—W. H. Carr, Leesburg, Fla., prepared plans for school.

Fla., Frostproof.—Special School Dist. No. 22 will vote in May on \$15,000 to erect and equip brick school. Address Dist. School Trustees.

Fla., Hallendale.—Hallendale Special Tax School Dist. defeated \$10,000 bonds for school. (Lately noted.)

Fla., Leesburg.—Leesburg Graded School will expend \$28,000 (without mechanical equipment) to erect school; 75x92 ft.; industrial school and auditorium in the basement; auditorium 75x85 ft.; seating capacity (including galleries) 800; brick and stone; steel ceilings; asbestos shingle or tile roof; cost of heating plant \$1800; cost of lighting \$350; W. H. Carr, Archt., Leesburg. (Lately noted.)

Fla., Plant City.—Board of Public Instruction of Hillsboro County, Marshall Moore, Supt., Tampa, receives bids until Apr. 25 to erect schools at Plant City and Springhead Dist. near Coronet mines according to plans by Willis R. Biggers, Tampa; plans and specifications at office of Supt. of Public Instruction, Tampa; separate bids for plumbing for Plant City structure.

Fla., Springhead.—Board of Public Instruction of Hillsboro County, Tampa, Fla., receives bids until Apr. 25 to erect school. (See Fla., Plant City.)

Fla., Tampa.—Tampa School Dist. proposes to issue \$225,000 bonds for schools as follows: \$50,000 to pay indebtedness; \$30,000 to erect school at Ybor City; \$40,000 for Madison St. School; \$25,000 for school at Moody Heights; \$25,000 for school in or near Suburb Beautiful; \$5000 to move present Heights school for Harlem Academy and supply brick basement for same; \$10,000 for school in Hyde Park section. Address Dist. School Trustees.

Ga., Albany.—Board of Education and City Council receives bids until Apr. 27 in office of The Mayor, City Hall, to erect and com-

plete grammar school; Tudor-Gothic style; cost \$30,000; 11 classrooms; mechanical heat and ventilation; composition roof; tapestry brick; limestone and terra-cotta trimmings; Sayre & Baldwin, Archts., Bleckley Bldg., Anderson, S. C.; contractors wishing to build apply to Archts. before Apr. 16, or to Jos. Ehrlich, Albany. (Lately noted.)

Ga., Americus.—City has plans by A. Ten Eyck Brown, Atlanta, and Leroy Kern, Georgia Life Bldg., Macon, Ga., for Furlow School; will utilize one wing of present structure; 2 stories and basement; 16 classrooms; brick; limestone trimmings; hard plaster; rift pine floors; tar and gravel roof; steam heat; cost \$30,000. (Lately noted.)

Ga., Atlanta.—A. N. Canton, Atlanta, prepared plans for proposed Woodberry Hall for Miss Woodberry's School for Girls in Ansley Park; 2 stories; brick and stone; colonial style; cost \$20,000.

Ga., Cuthbert.—St. Andrews Female College, J. W. Malone, Pres., will enlarge and improve college.

Ga., Pelham.—City will erect \$15,000 school; 4 classrooms and auditorium to seat 400 to 500; domestic science and manual training facilities; engaged P. E. Dennis, American National Bank Bldg., Macon, as consulting architect in architectural competition for plans for same. (Lately noted to vote on bonds.)

Ga., Tifton.—City votes May 12 on \$47,000 bonds to include \$13,000 to erect school, \$8000 for city hall and fire department, \$7000 for fire equipment, fire alarm system and furnishings, and \$17,000 for extension and improvements to water-works system; R. E. Dinsmore, Councilman. (Lately noted to have plans by T. F. Lockwood, Columbus, Ga., for school.)

Ky., Fleming.—Mineral Fuel Co. will erect central public school; 60x90 ft.; 8 rooms and basement; cost \$30,000; also 2 frame buildings, one at Haymond and other in Yount's Fork; cost \$10,000 each. Address School Board.

Ky., Louisville.—Board of Education will acquire property on Flatlick Rd. near F St., 400x400 ft., as location for one of schools included in bond issue; having plans prepared by D. N. Murphy & Bro., Louisville, for one building. (Lately noted.)

La., Vivian.—Vivian School Dist. voted \$70,000 bonds to erect school; 100x172 ft.; fireproof; tile roof; steam heat; cost (without mechanical equipment) \$60,000. (Lately noted.)

Md., Easton.—School Commrs., Nicholas Orem, Secy., will expend \$18,000 to erect annex to high school; 7 rooms; brick; slate roof; Frank Ross, Archt., Easton; steam heat. (Lately noted to receive bids until May 12.)

Md., Thurmont.—City will erect school; cost \$25,000; plans not decided; address H. D. Beachley. (Lately noted considering \$36,000 bonds to erect school.)

Md., Towson.—Baltimore county will vote Apr. 19 on \$500,000 bonds for schools. Address County Commrs. (Lately noted.)

Miss., Alhambra.—City is reported to issue \$9000 bonds to erect school.

Miss., Hickory.—City selected P. J. Krouse, Meridian, Miss., to prepare plans for proposed school, for which \$10,000 bonds will be issued.

Miss., Mississippi City.—Mississippi City Rural School Dist. will issue \$15,000 bonds to erect school. Address Dist. School Trustees.

Mo., Kansas City.—School Board is reported to erect additional wing to Allen School.

Mo., Poplar Bluff.—City voted \$20,000 bonds for school funds and free textbooks for public schools. Address School Board.

Mo., Springfield.—City votes May 5 on levy to erect school; A. D. Allen, Secy. Board of School Directors. (Lately noted.)

N. C., Asheville.—Buncombe County Board of Education is reported to expend \$10,000 to \$12,000 to erect 4 schools at Laurel Hill, Blady, Grace and Alexander Chapel districts and make other improvements.

N. C., Charlotte.—County Supt. Wm. McCluskey, receives bids until Apr. 17 to alter and erect addition to Matthews High School; plans and specifications at office of Louis H. Asbury, Archt., Charlotte.

N. C., Concord.—City has plans by Sayre & Baldwin, Bleckley Bldg., Anderson, S. C., for school; cost \$15,000.

N. C., Elkin.—City is having plans prepared by Jno. B. Burcham (not J. B. Burcham as lately reported) for school; 80x115 ft.; mill construction; metal roof; cost \$15,000; plans will soon be ready for bids.

N. C., Gastonia.—Rev. A. T. Lindsay will erect proposed school for boys; cost \$25,000.

N. C., Salisbury.—Chestnut Hill School Dist. votes May 19 on tax to erect school. Address Dist. School Trustees.

N. C., Statesville.—City votes June 16 on \$25,000 bonds to erect and equip school. Address The Mayor. (Lately noted.)

S. C., Johnston.—City selected architect to prepare plans for school in Dist. 11; ordinary construction; steam or hot-water heat to cost \$4000; electric lights; 12 classrooms and auditorium; seating capacity 600; cost \$20,000; S. J. Watson, Pres. of School Board. (Lately noted.)

Tenn., Clarksville.—City will erect \$6000 school. Address The Mayor.

Tenn., Morristown.—Hamblen county defeated \$50,000 bonds to erect school. (Lately noted.)

Tenn., Nashville.—Vanderbilt University, Dr. J. A. Witherspoon, Pres., is reported to erect 4-story laboratory building and make improvements to medical department.

Tex., Alameda.—Alameda School Dist. voted \$7000 bonds to erect school. Address Dist. School Trustees.

Tex., Berclair.—City will erect \$5000 school; plans bond election. Address The Mayor.

Tex., Charlotte.—School Trustees (John Shannon, Geo. Kuntz and others) will erect buildings; 3 stories; brick; cost \$18,000.

Tex., Dallas.—City voted \$600,000 bonds for schools, making about \$900,000 available for school improvements. Address Board of Municipal Commrs. (Lately noted.)

Tex., Elkhart.—City voted \$8000 bonds to erect brick school. Address School Board.

Tex., Georgetown.—Southwestern University has plans by C. F. Ward, Houston, Tex., for proposed Fine Arts Bldg.; 3 stories; 10 teaching rooms, 40 practice rooms, art-room, directors' room; auditorium to seat 1500; stage to accommodate 350, including orchestra; bowl floor; pipe organ; gymnasium for women in basement; cost \$75,000. (Lately noted to erect science building.)

Tex., Houston.—Harris county is reported to expend \$100,000 for school improvements during present year. Address Supt. Pugh of Harris County Schools.

Tex., Hubbard.—City receives bids until Apr. 20 to erect 2-story and basement brick school; plans and specifications at office of Field & Clarkson, Architects, Fort Worth, Tex., and W. O. Bowman, Mayor, Hubbard; separate bids for plumbing, heating and wiring.

Tex., Lawrence.—Lawrence School Dist. voted tax to erect brick school. Address Dist. School Trustees.

Tex., Navasota.—School Dist. No. 13 of Grimes county is reported to let contract May 4 to erect brick school. Address Dist. School Trustees.

Tex., Paris.—Cunningham School Dist. of Lamar County, Frank H. Bradley, Secy., voted \$5000 bonds to erect school building.

Tex., Point.—School Board receives bids until Apr. 23 to erect 2-story brick school; plans and specifications at office of secretary of board at Point and C. H. Leinbach, Archt., Mineral Wells, Tex.

Tex., Richardson.—Virgil Walton and Sam P. Harben, Bldg. Com. of Board of Trustees of Richardson Independent School Dist., receive bids until Apr. 25 to erect school; plans and specifications at office of Mr. Walton at Richardson.

Tex., San Antonio.—School Board will expend \$70,000 to erect manual training and domestic science building; 2 stories and basement; turning, finishing, joinery, drawing and class rooms on first floor; machine shop, forging shop, molding and framing room, pattern-making room, etc., in basement; domestic science and class rooms on second floor; Leo M. J. Dielmann, Archt., San Antonio. (Lately noted.)

Tex., Waco.—School Board acquired site on West Ave. between 14th and 15th Sts. and is having plans prepared by Milton Scott, Waco, for grammar school. (Lately noted having voted school bonds.)

Va., Blacksburg.—O. H. Culpepper, Virginia Polytechnic Institute, is preparing plans for fieldhouse and gymnasium on college campus; 112x55 ft., with 2 wings 108x14 ft.; cost (without mechanical equipment) \$7000; ordinary construction; proslate roofing; steam heat to cost \$600; electric lighting. Address proposals to Branch Bocock, member of Building Com. (See Machinery Wanted.)

Va., Richmond.—Dr. Churchill G. Chamberlayne is reported planning to erect school for boys near Richmond.

W. Va., Follansbee.—City has plans by Willard Wells, Wellsburg, W. Va., for school at Main and State Sts.; brick; limestone

trimmings; 8 rooms; gymnasium in basement; electric lights.

W. Va., Wheeling.—Board of Education, Frank Stanton, Clerk, engaged Fred F. Faris, Archt., Wheeling, to prepare plans to rebuild high school and erect addition; reinforced concrete; fireproof; cost about \$70,000. (Lately noted.)

STORES

Ala., Birmingham.—Ralph Agrimis will erect 1-story brick building at Avenue C and 234 St.; cost \$4250.

Ala., Clanton.—Dr. N. S. Johnson will erect building; 2 stories; brick; tile floors; steel beams; tar and gravel roof; cost \$8000; to be occupied by Upchurch Drug Co. and others.

Ala., Birmingham.—Mrs. C. J. Robertson will expend \$3750 to repair fire damage at Lakeview Ave. and Glenview Rd.

Ala., Birmingham.—R. D. Burnett is reported to improve and extend billiard parlors in Henly Bldg., providing store space, etc. (See Miscellaneous.)

Ala., Elba.—Dr. S. W. May is reported contemplating erection of brick store building.

Ark., Harrison.—Jeff Wood, Mgr. of Harrison Produce Co., is reported to erect building on Stevenson Ave.; 2 stories; 125x25 ft.; buff pressed brick; lower floor to contain store room 40 ft. long; remainder of structure to have concrete floor and will be used as market; cost \$4000.

Ark., Shirley.—E. E. Stevens will erect \$10,000 store; brick or stone.

Fla., Fort Myers.—J. E. Hendry, Sr., will erect store and hotel building. (See Hotels.)

Fla., Jacksonville.—Buckland & Fletcher will erect store and warehouse building to be occupied by Skinner Bros.; 1 story; brick; cost \$5000.

Fla., Jacksonville.—D. M. McPhail will erect 2-story stone veneer building on 11th St.; cost \$3200.

Fla., Perry.—S. J. Thorpe will erect brick store building.

Fla., South Jacksonville.—Jacksonville Ferry & Land Co. will rebuild burned stores; probably brick or sheet iron; concrete flooring.

Ga., Atlanta.—Mrs. M. E. Farmer will erect store building; day labor; cost \$4000.

Ga., Augusta.—C. H. Schneider is reported having plans prepared by L. F. Goodrich, Augusta, for building at Broad & Kollock Sts.; 5 stories; brick; 12 show windows; cost \$40,000 to \$50,000.

Ga., Tallapoosa.—A. L. Jackson will erect brick store building.

Ga., Tallapoosa.—Walter Morrow will erect building at Alwene Ave. and Atlanta St.; 2 stories; brick; 40x70 ft.; lower floor for printing plant of L. E. Chandler Co.; upper floor for stores.

Ky., Danville.—Mrs. E. N. Gilcher has plans by Grant Miller for department store; 60x130 ft.; ordinary construction.

Ky., Irvington.—Ed F. Alexander will erect store and dwelling at Main and Walnut Sts.

Md., Baltimore.—Up-to-Date Millinery Co., 319 W. Baltimore St., will repair building lately noted burned at loss of \$5000.

Md., Baltimore.—Isaac Benesch & Sons, 549-55 N. Gay St., have plans by Louis Levi, Philadelphia, for alterations to store, to include new front; contractors estimating are: Edw. Watters & Co., 509 N. Charles St.; Chas. L. Stockhausen, Marine National Bank Bldg.; Fred Decker & Son, 1209 E. Biddle St.; John Hiltz & Son, 7 Clay St.; Geo. Bunneke & Son, 305 St. Paul St.; Morrow Bros., Fidelity Bldg., all of Baltimore.

Md., Cumberland.—Saml. Wertheimer will remodel building for stores, etc. (See Theaters.)

Mo., St. Louis.—Landay Real Estate Co. will expend \$35,000 (without mechanical equipment) to erect store and office building at 4506 Olive St.; mill construction; Otis elevator; Clymer & Drischler, Architects, Wainwright Bldg., St. Louis. (Lately noted.)

Mo., St. Louis.—Charles Gerber will erect store and dwelling. (See Dwellings.)

Mo., St. Louis.—C. C. Nicholls, Jr., will erect hotel and store building for client. (See Hotels.)

N. C., Charlotte.—E. D. Latta and J. B. Duke are reported to erect building on East 1st St., from Church St. to Mint St.; 600x110 ft.; 3 stories and basement; reinforced concrete; frontage almost entirely of plate and prism glass; Church St. section to be occupied as offices by Southern Power Co., other two sections for 18 or 20 stores, each with vaults, elevator service, transportation facilities, etc.; approximate cost \$250,000.

N. C., Greensboro.—Greensboro Hardware Co. is reported erecting business building on S. Davis St.

N. C., Greensboro.—Taylor & Jones are reported erecting business building.

N. C., Kings Mountain.—W. A. Mauney & Bro. are reported to erect building to replace structure reported burned at loss of \$4000.

N. C., Lexington.—G. U. G. Besiecker will erect brick business building to cost \$7500.

N. C., Lexington.—Jule C. Smith will erect 2-story brick store at Main and 1st Sts.

N. C., Lexington.—R. B. McRary will erect brick store building at Main and Depot Sts.

N. C., Winston-Salem.—W. C. Tise will erect business block at E. 4th St. and Linden St.; 2 stories and basement; cost \$3000.

Okla., Tulsa.—Chastain Cathy has plans by J. P. Curtain for store and garage; 90x140 ft.; cost \$12,000; brick; concrete floors; steel girders; tar and gravel roof; gas heat; gas and electric lighting; construction by owner. (Lately noted.)

S. C., Columbia.—Dr. L. B. Owens is erecting 3 brick buildings on Gist St. between Gervais and Lady Sts.; cost \$12,000.

S. C., Greenville.—W. N. Watson will erect 3-story brick building on E. Coffee and Brown Sts.

Tenn., Nashville.—Mrs. Otto Giers will erect brick building on 18th Ave. S.; cost \$6000.

Tenn., Nashville.—Thos. J. Tyne has plans by Harry J. Frahn, Nashville, for 2 business buildings at 815 Church St.; enamel brick fronts; copper and plate-glass show windows.

Tex., Dallas.—C. W. Owens will erect one-story brick building at 302 Elm St.; cost \$6000.

Tex., Dallas.—J. M. & M. R. Ferguson will erect 2-story brick and brick veneer building at 923 W. Jefferson St.; cost \$12,000.

Tex., Dallas.—Trinity Construction Co. will erect 2-story brick building at 2218 S. Harwood St.; cost \$8000.

Tex., Dallas.—Schmucker & Hunt will erect 1-story brick store at 4108 Ross St.; cost \$4000.

Tex., Dallas.—W. D. Burch has plans by Parker-Rittenberry Co. for 3 stores; brick; cement floors; plate-glass fronts.

Tex., Dallas.—J. F. Smith will erect addition and repair structure at 3407 Swiss St.; cost \$4000.

Tex., Dallas.—Mrs. Z. E. Marvin will erect 1-story brick store at 833-35 W. Jefferson St.; cost \$12,000.

Tex., Texarkana.—W. C. Hardin, Corpus Christi, Tex., is reported erecting commercial building.

Tex., Texas City.—W. H. Suttle, McKinney, Tex., will erect building at 6th St. and 7th Ave.; 2 stories; brick; 50x110 ft.; lower floor for stores; upper floor for lodgerooms; cost \$15,000.

Tex., Wichita Falls.—A. F. and A. M., R. C. Smith, Chrmn. of Comm., will erect store, lodge and office building. (See Association and Fraternal.)

Va., Newport News.—Frank Roth is reported erecting 2-story brick building at 28th St. and Jefferson Ave.; 25x60 ft.; cost \$5000.

Va., Newport News.—S. Mirmelstein will erect business building.

Va., Norfolk.—H. C. Hofheimer, A. B. Seidner and Albert Gerst are reported considering erection of building at Granby and Queen Sts.

W. Va., Beckley.—E. M. Payne will rebuild business structures; 40x90 ft. and 40x115 ft.; brick; probably fireproof; hot-water or steam heat; electric lighting; cost \$10,000; architect not selected; bids opened May 1; lately reported burned. (See Machinery Wanted.)

W. Va., Bowers.—Davis Collieries Co., Elkins, W. Va., is having plans prepared by A. C. Lyons, Jacobs Bldg., Fairmont, W. Va., for store and office building; brick and fireproof; 3 stories.

W. Va., Huntington.—F. F. Starcher and others are reported to erect store building; 4 stories; brick and stone; cost \$50,000.

W. Va., Moundsville.—O. V. Ault opens bids Apr. 18 to erect store on Jefferson Ave.; 110x28 ft.; steel, brick and wood; composition roof; hot-air heat; gas and electric lighting; cost \$5000; Geo. C. Hugule, Archt., Chicago. (See Machinery Wanted.)

THEATERS

Ala., Scottsboro.—W. F. Snodgrass has plans by H. D. Breeding, 15 Watts Bldg., Birmingham, for opera-house; 40x110 ft.; pressed brick; steam heat; composition roof; seating capacity 600; cost \$15,000.

Md., Cumberland.—Saml. Wertheimer will remodel building for moving-picture parlor, offices and stores.

Md., Hagerstown.—Potomac Real Estate Co. and Antietam Real Estate Co. each inceptd. with \$150,000 capital by Ernest Westfall, A. H. Gunnel, Harry E. Bester and others; former company will erect theater, in which latter will conduct exhibitions.

Mo., Sikeston.—E. J. Malone will erect theater.

Okla., Oklahoma City.—Stewart & Wilderson, 4th floor American National Bank Bldg., Oklahoma City, are preparing plans for theater; 65x100 ft.; frame and stucco; beaver board.

Va., Norfolk.—Palace Amusement Co. opened bids to erect moving-picture theater; brick and stone; 50x201 ft.; cement floor; steel trusses; seating capacity; Nash-Jones Co., Norfolk, is lowest bidder at \$16,823; Jno. D. Winn, Archt., Norfolk. (Lately noted.)

W. Va., Wheeling.—B. H. Bliske, 3315 Jacob St., Wheeling, will expend \$6500 to erect moving-picture theater at Marshall and 8th Sts.; 27x108 ft.; fireproof; furnace; electric lighting; Geo. H. Dieringer, Archt., Wheeling; bids opened about Apr. 10. (Mr. Dieringer lately noted preparing plans.)

WAREHOUSES

Ala., Birmingham.—Roden estate is reported to rebuild structure occupied by Acme White Lead & Color Co. (Lately noted burned.)

D. C., Washington.—Robt. B. Caverly, 1800 Lehigh Ave., Philadelphia, Pa., and others will expend \$60,000 (without mechanical equipment) to erect warehouse in rear of 1331 G St.; 30x105 ft.; fireproof; slag roof; 8x8 elevator, capacity 6000 lbs. freight. Following contractors are estimating: Andrew Murray, 729 12th St. N. W.; Page Construction Co., Hibbs Bldg.; Richardson & Burgess, and Arthur L. Smith & Co., 635 F St. N. W., all of Washington; Averill & Adams, Architects, 719 Union Trust Bldg., Washington; lately noted. (See Machinery Wanted.)

Ky., Smiths Grove.—People's Loose Leaf Warehouse Co. will erect loose leaf tobacco warehouse during summer; ordinary construction; cost \$10,000; lately noted inceptd., \$10,000 capital. (See Machinery Wanted.)

La., New Orleans.—Board of Port Commrs., Robt. G. Guerard, Pres., engaged Ford, Bacon & Davis, 115 Broadway, New York, as engineers to prepare plans for and superintend construction of warehouses, terminal trackage and wharves for proposed system of handling and storing cotton; sold \$3,000,000 bonds. (Lately noted.)

N. C., Washington.—Washington Tobacco Warehouse Co. is reported to erect addition to warehouse.

S. C., Columbia.—Hammond-Gregg Co. will probably rebuild warehouse; plans not determined. (Lately reported burned.)

S. C., Columbia.—Dr. L. B. Owens is erecting 3 brick buildings on Gist St. to cost about \$12,000; one to be 2 stories, 60x80 ft., for warehouse; another, 20x70 ft., for bottling plant; both for Richmond County Dispensary; other for stables and shed.

S. C., Greenville.—Carolina Supply Co. will erect 2-story sheet-iron building.

S. C., Greenwood.—H. L. Watson, J. S. Bailey, J. P. Abney and G. W. Rush are reported to erect 3 or 4 warehouses; 90x25 ft.

Tenn., Memphis.—O. K. Storage Co., J. M. Walker, Mgr., acquired building at 141-51 S. 2d St. and will expend \$10,000 to remodel for storage plant; provide separate compartments, construct steel fireproof vaults, burglar locks on all doors and make structure fireproof.

Tex., Dallas.—C. A. Bryant has plans by C. W. Bulger & Son, Dallas, for warehouse; 3 stories and basement; reinforced concrete.

Northrop Looms in the South.

In a recent issue of Cotton Chats, comparative statements of the Northrop looms, manufactured by the Draper Company, Hopedale, Mass., are presented. It is stated that of the Northrop looms in every section of the country, including orders to January 1, 1914, there are 129,663 in the Southern States, 120,233 in the Middle and Western States and 108,045 in the New England States. The proportion of the Northrop looms, compared with ordinary looms, is much larger in the Southern States than elsewhere. As an example, the 75,062 Northrop looms in South Carolina represent a comparatively large percentage of the entire number. A striking illustration is presented in the issue of Cotton Chats, showing the Draper Company's scrap pile of common looms which have been replaced by the Northrop looms.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Mo., St. Louis.—Wm. F. Prants let contract to C. Toenbroehn to erect 2-story tenement-house at 3409-11 Osage St.; cost \$5500.

Mo., St. Louis.—Wm. Kretschmar let contract to H. Luehrman to erect 2-story tenement-house at 3318-20 California Ave.; cost \$4800.

Mo., St. Louis.—M. B. Dwyer let contract to J. Reilly, St. Louis, to erect 2-story tenement-house at 3132-34 Rolla Pl.; cost \$5000.

Mo., St. Louis.—R. Vanvig let contract to M. Kloss to erect 2-story tenement-house at 456-58 Natural Bridge St.; cost \$5000.

Mo., St. Louis.—Wm. E. Elckhoff let contract to Wm. Hoppel to erect 2-story tenement-house at 5217-19 Devonshire St.; cost \$5000.

Mo., St. Louis.—Catherine Shields let contract to G. Szepanski to erect 2-story tenement-house at 2801-03 Norwood St.; cost \$5000.

Mo., St. Louis.—P. R. Pollard let contract to L. Milberger to erect 2-story tenement-house at 3644 Bamberger St.; cost \$4000.

Tex., Dallas.—Saml. F. Davis, 203 Scollard Bldg., has plans by and let contract to W. E. Arnold, 4726 Victor St., Dallas, to erect apartment building; 64x52 ft.; 2 stories; cost \$9000; mill construction; Carey's roofing; gas heating; electric lighting; other contracts also let. (Lately noted.)

Tex., El Paso.—W. K. Ramsey, Trust Bldg., let contract to Fisk-Ramsey Realty Co. to erect apartment-house; 3 stories; 69x110 ft.; cost (without mechanical equipment) \$40,000; brick and stucco; asbestos roof; steam heat to cost \$2400; J. R. Fisk, delineator; O. H. Thorman, Archt.; subcontracts let as follows: W. C. Taylor, brick and stone; Geo. Beaudett, carpentry; Bush Plumbing & Heating Co., El Paso, plumbing; Elliott & Barry Engineering Co., El Paso, heating plant; all work to be sublet. (Lately noted.)

Va., Newport News.—W. T. Chapin will erect apartment-house on 29th St.; 4 stories; 25x100 ft.; pressed brick; lower floor for store and offices; upper floor for apartments; ordinary construction; slag roof; electric lighting; cost (without mechanical equipment) \$15,000; Berger sidewalk lights to cost \$150; hand-power freight elevator to cost \$250; C. M. Robinson, Inc., Archt., Richmond; subcontracts let as follows: W. R. Carter, for cement; G. W. Whiteley, brick; L. R. Timberlake, excavation. (See Machinery Wanted.)

Va., Norfolk.—R. F. Hogue, Petersburg, let contract to Vega & Richardson, Withers Bldg., Norfolk, to erect apartment-house on Colonial Ave.; 3 stories; eight 6 and 7-room suites; tapestry brick; frontage 100 ft.; cost \$35,000.

W. Va., Wheeling.—Jacob Sentlinger, Jr., let contract to A. B. Imhoff to erect apartment-house at Main and 5th Sts.; 3 stories; red pressed and Dennison interlocking brick; cost \$18,000.

BANK AND OFFICE

Ala., Pell City.—City Bank & Trust Co. let contract to B. W. McDuffey to erect building; gravel roof; steam heat; lower floor for bank and stores; upper floor for offices.

Ga., Boston.—Merchants and Farmers' Bank let contract to remodel bank building; contract let to Alabama Marble Co., Birmingham, Ala., for front; tin roof; cost \$10,000.

Okla., Ringling.—First National Bank is reported to have let contract to erect bank building.

Tex., Clifton.—First Guaranty State Bank let contract to H. H. Killion, Clifton, to remodel bank building.

Tex., Eagle Pass.—First National Bank let contract to Mr. Seed to erect proposed bank building; cost \$25,000.

Va., Newport News.—W. T. Chapin will erect store, office and apartment building. (See Apartment-houses.)

W. Va., Beckley.—Bank of Raleigh let contract to T. H. Wickham, Beckley, to erect bank building to contain printing plant and offices; 27x105 ft.; cost (without mechanical equipment) \$20,000; fireproof; W. H. Miller, Archt., Roanoke, Va. (Lately noted.)

W. Va., Parkersburg.—Parkersburg National Bank let contract to H. H. Vought & Co., 346 Madison Ave., New York, to erect bank building; 1 story; 45 ft. high; Vermont marble front; north wall of light brick in panels; fireproof; cement floor and joist; wainscoting and lower part of counter screen of Italian marble; floor surface Tennessee marble; Ger-

man sliver on counter screen; vault contract to be let separately; cost \$100,000; Dennison & Hiron, Archts., 475 5th Ave., New York; noted in December. (See Machinery, etc., Wanted.)

W. Va., Folansbee.—Bank of Folansbee let contract to A. S. Craig to erect bank and office building on Main St.; 2 stories; brick; cement foundation; 25x45 ft.

CHURCHES

Ga., Commerce.—Presbyterian Church, Rev. J. N. McCord, pastor, is completing building; cost \$12,000; brick; furnace heat; electric lighting to cost \$200; L. B. Valk, Archt., Los Angeles, Cal.; contract let locally. (Lately noted.)

Ky., Cynthiana.—Baptist church let contract to W. P. Humphrey, Cynthiana, to erect building; 68x108 ft.; cost (without mechanical equipment) \$35,000; ordinary construction; terra-cotta tile roof; steam heat to cost \$1800; S. E. Desjardins, Archt., Fourth National Bank Bldg., Cincinnati; construction by May 1. (Lately noted.)

N. C., High Point.—Christian Church let contract to Wooding & Brown to erect building.

Tex., Cleburne.—First Christian Church let contract to John A. Anderson, Cleburne, to erect tabernacle at Main and Wardville Sts.; 70x100 ft.

Tex., Dallas.—Munger Place Methodist Episcopal Church South let contract to Geo. W. Moore Construction Co., Dallas, to erect temporary church; cost \$6000; will erect permanent structure later.

Va., Roanoke.—High St. Baptist Church, R. Wade, Chrmn. of Trustees, let contract to R. H. Angell, 218 9th Ave. S. W., Roanoke, to rebuild structure; 60x90 ft.; cost (without mechanical equipment) \$25,000; ordinary construction; slate roof; steam heat to cost \$1500; electric lighting to cost \$400; subcontract let to S. Goodson, 204 3d Ave. N. W., Roanoke; amount of subcontracts \$10,000. (Lately noted.)

Va., Staunton.—Methodist Episcopal Church let contract to F. L. Yount, Staunton, to complete building; main auditorium with 6 art-glass windows; cost \$21,000.

CITY AND COUNTY

Mo., St. Louis.—Engine-house.—City will erect engine-house on 6th St.; 50x82 ft.; fireproof; composition and tile roof; contract (lately noted) let to Gillick Bros., 310 Steins St., St. Louis, at \$27,423.

N. C., Charlotte—Jail, etc.—Mecklenburg County Commrs., W. M. Long, Chrmn. of Building Com., let contract to J. A. Jones, 404 Realty Bldg., Charlotte, to remodel and erect addition to jail, including jailer's residence, and criminal courtroom; 104x196 ft.; cost \$60,000; fireproof construction; combination roof; steam heat; electric lighting; electric elevator; L. A. Bellonby, Archt., Charlotte; heating, plumbing and cage work contracts will be considered later. (Lately noted.)

Tex., Kingsville.—Hospital and Jail.—Kelsey County Commrs. let contracts to erect courthouse, hospital and jail. (See Courthouses.)

COURTHOUSES

Ark., Heber Springs.—Cassville (Mo.) Marble & Lime Co. has contract for stone for Cleburne county courthouse, for which A. M. Byrnes, Fayetteville, Ark., has general contract; 64x90 ft.; fireproof; tar and metal roof; steam heat; Clyde A. Ferrell, Archt., 210½ Louisiana St., Little Rock. (Lately noted.)

N. C., Raleigh.—Wake County Commrs. let subcontracts for courthouse and jail: Richmond Structural Steel Co., Richmond, Va., steel frame and ornamental iron work; Atlantic Terra-Cotta Co., New York, granite stone terra-cotta for exterior trimming for entire building, first floor line up; J. E. Smith, Mt. Airy, N. C., granite for exterior lining up to first floor line; electrical contract to local contractors; Little-Cleckler Construction Co., Gen. Contrs., Anniston, Ala. (Other contracts lately noted.)

Tex., Kingsville.—Kleberg County Commrs. are reported to have let contract to Central Contracting Co., Houston, to erect courthouse and hospital; Pauly Jail Building Co., St. Louis, to erect jail; wiring, Wright Bros., San Antonio; plans, by Atlee B. Ayres, 626 Bedell Bldg., San Antonio, call for courthouse 36x96 ft.; 2 stories and basement; hospital 2 stories and basement. (Lately noted to have let contract to Elgin Brick & Tile Co., Elgin, Tex., for brick.)

DWELLINGS

D. C., Washington.—J. C. Peacock let contract to H. Atchison to erect 2-story frame dwelling at 3930 Huntington St.; cost \$4000; A. E. Landvoigt, 1338 G St. N. W., Washington.

D. C., Washington.—H. P. Baldwin let contract to W. R. Coon, 2414 Irving St. N. E., Washington, to erect 2 two-story frame dwellings at 1700-02 Jackson St.; mill construction; slate roof; hot-water heat; electric lighting; cost \$6200.

D. C., Washington.—Mrs. Kate Lowell has plans by and let contract to A. R. Lindsey, Kenilworth, Washington, to erect 2-story frame dwelling at 6815 Pine Branch Rd.; cost \$4000.

D. C., Washington.—Anna L. Lukei has plans by and let contract to R. F. Lukei, 1220 Monroe St. N. W., Washington, to erect 2-story frame dwelling at 1418 Longfellow St.; cost \$6500.

D. C., Washington.—H. L. Thornton let contract to C. R. Hardesty to erect 2 two-story frame dwellings at 6813 5th St. and 6811 6th St. N. W.; cost \$5800; Doran S. Platt, 607 13th St. N. W., and E. N. Hamilton, 944 K St. N. W., Archts., both of Washington.

D. C., Washington.—Chas. B. Lingamfelter, 1338 Irving St., has plans by and let contract to S. L. Mantauy to erect 2-story dwelling at 3922 Livingston St. N. W.; cost \$4000.

D. C., Washington.—E. N. Leach has plans by and let contract to E. R. Walton, 321 E St. S. E., Washington, to erect 2-story dwelling at 1219 Franklin St.; cost \$3000.

D. C., Washington.—F. A. Loffler let contract to Chas. A. Lohr, Congress Heights, Washington, to erect 2-story dwelling on Alabama Ave.; cost \$4800.

D. C., Washington.—Frank McManamy let contract to J. C. Marsh, Southern Bldg., Washington, to erect 2-story dwelling at 3825 Huntington St. N. W.; cost \$6000; Spelden & Spelden, Archts., 1403 New York Ave. N. W., Washington.

D. C., Washington.—J. M. Beall let contract to Michael Weiler, 602 F St. N. W., Washington, to erect residence at 1963 Calvert St.; cost \$6475; Geo. S. Cooper, Archt., 1413 G St. N. W., Washington.

D. C., Washington.—Stewart C. Johnson let contract to D. F. Swab, 426 Rittenhouse St. N. W., Washington, to erect 2-story dwelling at 5214 14th St. N. W.; cost \$3500; E. N. Hamilton, Archt., 944 K St. N. W., Washington.

D. C., Washington.—C. C. Nixon let contract to W. C. Miller, 911 H St. N. W., Washington, to erect 2 two-story frame dwellings at 3405-07 34th Pl. S. E.; cost \$6000; A. E. Landvoigt, Archt., 1338 G St. N. W., Washington.

D. C., Washington.—G. Gordon Bailey, It is reported, let contract to D. D. Thompson & Co., 1335 F St. N. W., Washington, to erect two 2-story brick dwellings at 4215-17 9th St.; 6 rooms and bath each; tin roof; hot-water heat; electric lighting; cost \$3000 each.

Fla., Lake Worth.—Bryant & Greenwood, West Palm Beach, Fla., let contract to H. C. Bartholomew, West Palm Beach, to erect 50 cottages on development between Lake Worth and Latana, Fla.

Fla., Miami.—Jas. Deering, 1430 Lake Shore Drive, Chicago, let contract to Geo. Sykes, Inc., 314 E. 34th St., New York, to erect residence on Coconut Grove Rd.; about 120x120 ft.; 60-ft. court in center; concrete construction; semi-fireproof, with some interior partitions of wood; special mission tile roof; copper metal work; mechanical indirect steam heat in principal rooms; lighting from city plant and storage batteries, with motor generating set and storage batteries for motors; two automatic electric elevators and one automatic dumbwaiter, all to be installed by Otis Elevator Co., New York, Washington and other cities; all subcontracts under general contract; F. Burrall Hoffman, Jr., Archt., 15 E. 40th St., New York; J. A. McDonald, Miami, reported as superintendent of construction; also park grounds, construct driveways, beautify waterfront, etc.; previously noted. (See Machinery Wanted.)

Fla., Pensacola.—Martin H. Sullivan let contract to Dixie Construction Co., Pensacola, to erect bungalow, caretaker's house, servants' quarters, tank and tower and wharf.

Ga., Augusta.—E. H. Vogelsang will erect residence at 1111 Milledge Rd.; 40x30 ft.; stucco; J. B. Storey, Archt., Augusta; contract let to C. B. Holley, Augusta.

Ky., Louisville.—J. F. Ecker will erect 3 frame cottages at 100-5 Lydia St.; 4 rooms and bath; tin roof; electric lighting; cost \$4000; contract let to Wirth & Son.

Ky., Louisville.—Mrs. Fannie Hodges, 1922

Ivanhoe Court, has plans by and let contract to Chas. J. Meriwether, 117 S. 5th St., Louisville, to erect bungalow; 29x44 ft.; 1½ stories; Monarch furnace to cost \$150; electric lighting to cost \$50; concrete sidewalks to cost \$100. (Lately noted.)

Md., Baltimore.—Eben Hunting let contract to A. F. West, 15 E. Fayette St., Baltimore, to erect residence at Guilford; brick and concrete; 2½ stories; Owens & Sisco, Archts., Continental Bldg., Baltimore. (Lately noted.)

Md., Chevy Chase.—Miss F. Beall let contract to R. P. Whitty & Co., Union Trust Bldg., Washington, D. C., to erect residence; 30x36 ft.; ordinary construction; slate roof; hot-water heat to cost \$500; B. F. Myers, Archt., Bond Bldg., Washington; total amount of subcontracts \$5860. (Lately noted.)

Mo., St. Louis.—Tony Berra let contract to erect store and dwelling. (See Stores.)

Mo., St. Louis.—Francis T. Cutts let contract to Geo. Weber to erect 3-story dwelling at 6232 Aberdeen St.; cost \$10,000.

Mo., St. Louis.—F. W. Browning let contract to W. J. Knapp to erect 3 one-story dwellings; cost \$6000.

Mo., St. Louis.—Edw. Stamm let contract to L. W. Peters to erect 2-story dwelling at 4908 Lansdowne St.; cost \$5225.

Mo., St. Louis.—Alex. Tait let contract to J. Hill Construction Co., St. Louis, to erect 2-story dwelling; cost \$3500.

Mo., St. Louis.—Bernard Blum will erect residence on Labadie Ave.; 7 rooms; brick; tile bath; hot-water heat; brick, stone and tile porch; granitoid cellar; ordinary construction; composition roof; cost \$3500; contract let to Frank Dittmeier, 604 Chestnut St., St. Louis.

Mo., St. Louis.—McPherson Avenue Development Co. let contract to Bush-Burns Co., St. Louis, to erect 3-story dwelling at 4303 McPherson Ave.; cost \$10,000.

Mo., St. Louis.—Mary K. Bauman let contract to H. Roseman to erect 2-story dwelling at 3512 N. 14th St.; cost \$4000.

Tenn., Knoxville.—Jas. H. Anderson will erect \$17,000 residence; 12 rooms; Chas. I. Barber, Archt.; Thomas & Turner, Contrs.

Tenn., Memphis.—Mrs. C. R. Matsinger let contract to J. M. Harris to erect residence at 882 Wisconsin Ave.; cost \$5000.

Tenn., Memphis.—Chas. Hillstrom let contract to Memphis Building Co., Memphis, to erect 2 residences at 984-86 Jackson Ave.; cost \$7000.

Tenn., Memphis.—M. D. Grist let contract to Memphis Building Co., Memphis, to erect residence at 1324 Peabody Ave.; cost \$6000.

Tenn., Nashville.—Walter Stokes let contract to erect residence; colonial style; mat brick; stone trimmings; slate roof; hardwood floors; Harry J. Frahn, Archt., Nashville.

Tex., Beaumont.—G. L. Carnahan let contract to C. W. Prince, Beaumont, to erect 3 frame cottages on Cartwright St. near Park; cost \$3500.

Tex., Caldwell.—Baptist church let contract at \$3150 to Martin-Taylor Lumber Co. to erect parsonage.

Tex., Caldwell.—Gus Brewer let contracts to erect parsonage for pastor of Baptist Church; 33 ft. 6 in. x 33 ft. 6 in.; 2 stories; metal roof; electric lighting; cost \$3500; Wade Taylor, Archt., Caldwell. (Lately noted.)

Tex., Caldwell.—Baptist Church let contract to Martin-Taylor Lumber Co. to erect parsonage; 2 stories; cost \$3500.

Tex., Cleburne.—J. L. Williams let contract at \$3000 to J. R. Wallis to erect frame building. (Contract lately noted let for brick building, but plans were changed and contract rescinded.)

Tex., El Paso.—Hawkins Improvement Co. let contract to John Lorenson, 140 Mesa Ave., El Paso, to erect four 5-room bungalows; brick; cost \$3000; shingle roof; hot-air heat to cost \$150; electric wiring. (Lately noted.)

Tex., Fort Worth.—Hugh Jamieson let contract to Nat Wilson to erect 2-story 7-room frame residence; cost \$8000.

Tex., Fort Worth.—W. P. Hardwick let contract to B. C. Rhodes to erect 2-story 3-room residence; brick; cost \$8000.

Tex., Goliad.—Mrs. J. A. Pettus let contract to erect residence.

Tex., Houston.—H. B. Jackson will erect residence on Whitney St. and Lovett Blvd.; 2 stories; brick veneer; green tile roof; 30x44 ft.; hot-air heat; cost \$15,000; plans and construction by F. J. Maret, 805 Dennis Ave., Houston.

Tex., Madison.—Will Bailey let contract to Wm. Manning to erect residence.

Tex., Yoakum.—Dr. F. W. Ledbetter let contract to erect 2-story 8-room residence on Coke St.

Va., Norfolk.—C. O. Wrenn let contract to J. T. Lenoir, Norfolk, to erect residence at Colonial Ave. and Washington Park.

Va., Norfolk.—Richard Bailor let contract to J. T. Lenoir, Norfolk, to erect residence at Loch Raven.

Va., Salem.—W. C. Boxley, Gladehill, Va., is reported to have let contract to L. C. Rhodes, Roanoke, Va., to erect \$3000 residence near Salem.

GOVERNMENT AND STATE

Ky., Louisville.—Substation Postoffice.—Louisville Baptist Orphans' Home is reported to have let contract to erect substation postoffice at 4th and A Sts.; cost, including equipment, about \$5000.

Mo., DeSoto.—Postoffice.—Treasury Dept., Oscar Wenderoth, Supervising Archt., Washington, D. C., let contract at \$47,258 to Hiram Lloyd Building Co., St. Louis, to erect postoffice; 2 stories and basement; 3940 sq. ft. ground area; brick facing; stone portico and cornice; composition roof; fireproof except attic and roof. (Lately noted.)

HOTELS

Ala., Huntsville.—Huntsville Hotel Co. let contract to Baxter Bros. to erect hotel, Hummell Bros. for stonework and W. T. Hutchens for plumbing; 87x135 ft.; 5 stories; fireproof; steam heat; electric lighting; one passenger and one freight elevator; cost \$100,000; Barnwell & Jones, Archts., Chattanooga. (Lately noted.)

Fla., Lakeland.—Kibler Hotel Co. let contract to J. W. Tensley & Co., Tampa, Fla., to erect annex to hotel; 4 stories; brick; 50 rooms; cost \$40,000; McGuckeen & Hyer, Architects, Tampa. (Lately noted.)

Mo., St. Louis.—Allen estate let contract to Murch Bros. Construction Co., St. Louis, to alter Southern Hotel and Faust Restaurant at cost of \$5000.

W. Va., Wheeling.—E. B. Potts let contract to H. W. Fair to erect hotel on 10th St.; 60 rooms; fireproof; Fred Faris, Archt., Wheeling.

MISCELLANEOUS

Ky., Louisville.—Substation Postoffice.—Louisville Baptist Orphans' Home is reported to erect substation postoffice. (See Government and State.)

La., New Orleans.—Clubhouse.—Southern Yacht Club let contract to Humphreys & Eltman, New Orleans, for portion of proposed improvements to clubhouse, to cost about \$5000; other contracts to be let later.

Mo., St. Louis.—Barn.—Standard Oil Co., main office 26 Broadway, New York, local office Syndicate Trust Bldg., let contract to erect barn. (See Gas and Oil.)

Tenn., Elkton.—Clubhouse.—Appalachian Club, Knoxville, let contract to C. M. Bensley to erect addition to clubhouse; will increase capacity of dining-room to 200, provide additional bedrooms, etc.; J. H. Ryno, Archt.; will also enlarge electric-light plant, water-works and sewer system. (Lately noted.)

RAILWAY STATIONS, SHEDS, ETC.

Ark., Eureka Springs.—Missouri & North Arkansas R. R., W. O. Galbreath, Engr. M. W., let contract to H. E. Littleton, Harrison, Ark., to erect passenger station; 30x86 ft.; cost \$10,000; fireproof construction; asbestos shingle roof. (Lately noted.)

N. C., High Point.—Carolina & Yadkin River R. R., Bird S. Coler, Prest., 42 Cedar St., New York, let contract to I. G. Lawrence to erect station. (Previously noted.)

SCHOOLS

Ark., Gillett.—School Board let contract to General Construction Co., Pine Bluff, Ark., to erect school; 63x75 ft.; 2 stories and basement; cost \$16,000; ordinary construction; brick walls; wooden joists; tar and gravel roof; steam heat; Clyde A. Ferrell, Archt., Little Rock. (Lately noted.)

Fla., Lakeland.—Board of Public Instruction of Polk county let contract at \$19,200.50 to Parrish & Going, Tampa, to erect school; red brick; buff trimmings; tile roof. (Lately noted.)

Fla., Lawley.—School Board let contract through E. C. Horsford & Co., Archts., Eastman, to Rogers-Simmons Co., McRae, Ga., to erect school; cost \$9000. (Lately noted.)

Ga., Chauncey.—Chauncey School Dist. let contract to J. S. Hargrove & Son, Eastman, Ga., to erect school; cost \$10,000; E. C. Horsford & Co., Archts., Eastman, Ga.

Ky., Lexington.—Transylvania University

let contract to Frank Corbin, Lexington, to erect dormitory; brick; stone foundation; metal roof; 3 stories; 100 rooms; cost \$50,000; Smith & Bedford, Archts., Lexington. (Previously noted.)

Miss., Jackson.—Millsaps College let contract to I. C. Garber, Jackson, to erect administration building; 2 stories and basement; 150x124 ft.; cost (without mechanical equipment) \$50,000; semi-fireproof; tile and gravel roof; steam heat; electric lighting; H. N. Austin, Archt., Jackson. (Previously noted.)

Mo., Kirkwood.—Board of Education will expend \$40,000 to erect school on Webster Ave.; 77 ft. 6 in. x 126 ft. 6 in.; fireproof corridors; slate roof; steam heat; electric lighting; granitoid sidewalks; W. B. Ittner, Archt., St. Louis, Mo.; amount of subcontracts \$35,000; contract (lately noted) let to Luke-Bopp Construction Co., 810 Olive St., St. Louis, Mo.

Mo., St. Louis.—St. Elizabeth's Institution let contract to F. Kratzer to erect seminary building at 3416-24 Pestalozzi St.; 3 stories; cost \$40,000.

N. C., Red Oak.—Red Oak School Dist. let contract at \$10,000 to Ward Batchelor, Nashville, N. C., to erect farm life school; cost of heating and plumbing about \$2000 additional; John C. Stout, Archt., Rocky Mount, N. C. (Previously noted.)

Tex., Carrizo Springs.—City let contract to Chas. Fuess & Son, Cuero, Tex., to erect school; 2 stories; ordinary construction; tar and gravel roof; ventilator and stoves; cost \$30,000; C. H. Page & Bro., Archts., Austin. (Lately noted.)

Tex., Fort Worth.—Hebrew Institute Assn. let contract to E. F. Moore, Fort Worth, to erect school, to contain ballroom and gymnasium; 3 stories; 50x100 ft.; cost (without mechanical equipment) \$25,000; ordinary construction; tar and gravel roof; Field & Clarkson, Archts., 601 Wheat Bldg., Fort Worth; contractor may be addressed. (Lately noted.)

Tex., Fort Worth.—City let contract to B. F. & C. M. Davis, Fort Worth, to erect annex to Circle Park School; reinforced concrete and brick; auditorium, classrooms and manual training department; cost \$21,720; J. J. Pollard, Archt. (Previously noted.)

Tex., Tolar.—School Board let contract to Oates & Sullivan, Tolar, to erect school; 2 stories and basement; 11 rooms; fireproof; cost \$10,564; gravel roof; stoves to cost \$480; gasoline hollow-wire lighting to cost \$150; Walter E. Taylor, Archt., Fort Worth. (Lately noted.)

STORES

Ala., Allenville.—B. N. Allen let contract to Stratton Bros., Greensboro, Ala., to erect store building; one story; pressed-brick front; stone trimmings; tile roof; steam heat; 75x160 ft.; cost \$25,000; H. D. Breeding, Archt., 15 Watts Bldg., Birmingham.

Ala., Pell City.—City Bank & Trust Co. let contract to erect bank, office and store building. (See Bank and Office.)

D. C., Washington.—C. A. Martin let contract to C. A. Lohr, Congress Heights, Washington, to erect \$3000 store at 2306 Nichols Ave. S. E.

D. C., Washington.—National Capital Brewing Co. let contract to W. A. Volland, 2918 Sherman Ave. N. W., Washington, to remodel 4-story store at 1133 14th St. N. W.; cost \$6517; C. A. Didden & Son, Archts., Corcoran Bldg., Washington.

D. C., Washington.—W. D. Barry let contract to Burgess & Parsons, 700 10th St. N. W., Washington, to repair building at 2024 14th St. N. W.; cost \$6500.

D. C., Washington.—Christan Heurich let contract to Upton-Smoot Construction Co., 902 F St. N. W., Washington, to erect 2 stories at 1903-05-07 M St. N. W.; cost \$9393; Rich & Fitz Simons, Archts., Bond Bldg., Washington.

Fla., Plant City.—S. E. Mays let contract to W. D. Allen to erect 2 stories; 50x70 ft.; 2 stories; brick; shell or gravel roof; electric lighting; cost \$8000. (Lately noted.)

Ga., Augusta.—E. J. Lyon is reported to have let contract to T. O. Brown & Son, Augusta, to erect building on Ellis St.; 3 stories; brick; 80x135 ft.; 2 sections separated by brick wall; plate-glass fronts; elevators; will be occupied by Stovall-Pace & Co. and J. B. White & Co.; completion by Oct. 1.

La., Lake Arthur.—Lake Arthur Pharmacy let contract to S. T. Bradley to rebuild drug store; 30x80 ft.; fireproof; composition and shell roof; cost \$3600 to \$3900; J. M. Glas-son, Archt. (Lately reported burned.)

Mo., St. Louis.—Tony Berra let contract to P. Ceresa to erect store and dwelling at 1923 Cooper St.; 2 stories; cost \$7000.

Mo., St. Louis.—Eclipse Realty Co. let contract to S. Golightly to alter store at 619-21 N. 4th St.; cost \$3000.

N. C., Greensboro.—North Carolina Trust Co. let contract to W. B. Enoch to erect wholesale grocery store; 55x100 ft.; brick; metal roof; cost \$9000; electric elevator to cost \$800.

Tex., Brenham.—H. F. Hohlt Co. let contract to Alex. Griffin, Brenham, to remodel building; erect additional story to 2 structures; glass and steel fronts; show windows; arcade; steel ceiling; cost \$10,000 to \$15,000; C. H. Page & Bro., Archts., Austin. (Lately noted.)

Tex., Bryan.—Mrs. Nannie Rhode has plans by and let contract to R. S. Taylor to repair burned building; 24x130 ft.; ordinary construction; brick; tin roof; cost \$3000. (Lately noted.)

Tex., Fredericksburg.—Louis Priefs let contract to Klarnier & Schoemaker to erect store building; 67x120 ft.; 2 stories; ordinary construction; gravel roof; Edwin Stein, Archt.; cost \$18,000. (Lately noted.)

Tex., San Antonio.—Hugh Burns estate will erect 2-story reinforced-concrete building on Houston St.; foundation to support 2 additional stories.

Tex., Teague.—W. R. T. Drumwright let contract to erect brick business building at Main St. and Fifth Ave.

Va., Newport News.—W. T. Chapin will erect store, office and apartment building. (See Apartment-houses.)

Va., Roanoke.—L. R. Gills, Bedford City, Va., let contract to L. C. Rhodes, Roanoke, to erect building; 3 stories and cellar; cost (without mechanical equipment) \$15,000; slag roof; steam heat to cost \$800; electric lighting; cost of elevator \$1200; Wingfield & Overstreet, Bedford City, Va., Archts.

THEATERS

Md., Baltimore.—Hippodrome Co., 415 E. Baltimore St., let following subcontracts through Singer-Pentz Co., 609 Equitable Bldg., Baltimore, Gen. Contrs. for Hippodrome Theater: Steel, Harris-Silvers-Baker Co., New York; concrete, Price Concrete Construction Co., 225 St. Paul St., Baltimore; plastering, McNulty Bros., New York; tile partitions, Hammett Fireproofing Co., 920 Colorado Bldg., Washington, D. C.; terra-cotta, Atlantic Terra Cotta Co., 1170 Broadway, New York; brick work, B. Constable; cut stone, Graham & Graham, Calhoun St. and B. & O. R. R., Baltimore; damp-proofing, Philip Carey Mfg. Co., Cincinnati; cost \$225,000; Thos. W. Lamb, 501 5th Ave., New York, Archt. (Lately noted.)

RAILROAD CONSTRUCTION

RAILWAYS

Ark., Bentonville.—Survey is in progress for a railway from Bentonville to Rogers, Ark., 6 mi. J. M. Hinchliffe of Springfield, Mo., is Engr. in charge.

Ark., Parkin.—Stockholders of the Helena, Parkin & Northern Ry. Co. will meet May 4 to approve action of directors (taken Jan. 25, 1912) for an extension to connect with the Chicago, Rock Island & Pacific Ry. and to issue bonds for it. A. C. Stebbins is Prest.

Fla., Jacksonville.—The report that an interurban electric railway would be constructed from Jacksonville to Orlando and other points is denied by the Jacksonville Board of Trade.

Fla., St. Petersburg.—In order to secure an extension of the Tampa & Gulf Coast R. R. business men of St. Petersburg are planning to organize a company and purchase right of way for it. Chas. H. Brown is Prest. at Tampa, Fla.

Ga., Cumming.—Surveys will be finished in about a month for the proposed Cumming & Norcross Ry., 23 mi. Date for bids not set. Maximum grade 2 per cent. P. B. Lawrence is Ch. Engr. at Cumming.

Ga., Glenville.—Register & Glenville R. R. is reported purchased by B. K. Willingham of Hagan, Ga., representing others, who will make improvements. Line is 39 mi. long from Register to Glenville via Hagan.

Ga., Macon.—Considerable grading has been done on the new yards of the Central of Georgia Ry., and tracklaying is to begin within a few weeks. C. K. Lawrence, Savannah, Ga., is chief engineer.

Ky., South Portsmouth.—Chesapeake & Ohio R. R. is considering building a connecting line from South Portsmouth, Ky., to connection with Hocking Valley at Columbus, O., 93 miles. Decision not yet reached. M. J. Caples is V. P. at Richmond, Va.

Ky., Whitesburg.—Louisville & Nashville

Mo., St. Louis.—Great Northern Amusement Co. let contract to United Building Co., St. Louis, to erect theater on Grand Ave.; cost \$50,000.

Mo., St. Louis.—Phillips Amusement & Realty Co. will expend \$100,000 (cost without mechanical equipment) to erect theater; 110x144 ft.; fireproof construction; ventilating and heating to cost \$10,000; contract (lately noted) let to Frank P. McClure, St. Louis; address proposals to R. L. Phillips, Northland Theater Bldg., Grand and Florissant Sts.

S. C., Georgetown.—Wilson B. Arnhalter has plans by and let contract to T. W. Brightman to erect theater on Front St.; seat 400 in auditorium.

Tenn., Memphis.—Frank Henkel let contract to J. H. Moselage to erect motion picture theater on Lauderdale St.; 30x110 ft.; seating capacity 250; Mahan & Broadwell, Archts., Memphis.

Tex., Fort Worth.—Buchan & Glider, Fort Worth, have contract to erect theater; 24x100 ft.; fireproof; cost \$10,000.

Va., Newport News.—Mason & Dudley, trustees of Finch estate, let contract to R. V. Richardson, Hampton, Va., to erect moving-picture theater; 50x100 ft.; cost (without mechanical equipment) \$11,000; ordinary construction; asbestos roof; heating and ventilating system operated with 80-in. fan; air heated with low-pressure steam boiler to cost \$2500; granolithic sidewalks; C. T. Holtzclaw, Archt., Hampton; heating contract let to M. A. Williams, Norfolk; electrical work to S. J. Watson, Newport News.

WAREHOUSES

Mo., St. Louis.—Standard Oil Co., main office 26 Broadway, New York, local office Syndicate Trust Bldg., let contract to erect warehouse. (See Gas and Oil.)

N. C., Durham.—Durham Hosiery Mills let contract Fiske-Carter Construction Co., Greenville, S. C., to build 2-story 155x100 ft. warehouse; standard mill construction. (Lately noted.)

Tex., Dallas.—Simmons-Newsome Co. let contract at \$44,445 to W. R. Hatcher Construction Co., Dallas, to erect building at Laws, Broom and Carter Sts.; 3 stories and basement; fireproof; 100x115 ft.; reinforced concrete; H. A. Overbeck, Archt., 502-06 Juanita Bldg., Dallas. (Lately noted.)

Va., Richmond.—Standard Paper Mfg. Co. will erect two 3-story steel, brick and concrete warehouses; mill construction; cost \$14,000; contract let to E. J. Andrews & Co., 715 Stockton St., Richmond.

R. R. is building several small spurs in this region which are expected to be in operation in May or June. They are thus: Up Bottom Branch, .8 mi.; up Yonts Fork, 2 mi.; up Potters Fork, 2 mi. No other construction is now authorized, notwithstanding late press reports.

La., New Orleans.—Board of Port Comms., Robert G. Guerard, Prest., has engaged Ford, Bacon & Davis, Engrs., to survey terminal tracks for proposed warehouse system. Geo. H. Davis, New Orleans, represents the firm.

Md., Brunswick.—Frederick & Brunswick R. R. Co. is granted an extension of franchise to build an electric road between Brunswick and Jefferson, 7 miles. H. P. Baird is Mech. and Elec. Engr., Hagerstown, Md.

Miss., Biloxi.—W. L. Covel proposes that the long-contemplated Biloxi Great Northern R. R. be built from Biloxi to Beaumont, Miss., 66 mi. north. Some subscriptions made.

Miss., Jackson.—Jackson-Clinton Motor Transit Co. is chartered, capital \$10,000, "to own and operate an interurban car system between Jackson and Clinton," about 23 mi. Dr. J. W. Provine of Clinton, E. J. Ellzy, Dr. Julius Crisler and J. M. Evans of Jackson are the incorporators.

Mo., Joplin.—Century Engineering & Construction Co., 215 Miners' Bank Bldg., Joplin, proposes to build 150 mi. of electric railway.

N. C., Spencer.—R. B. Oliver, Maryville, Tenn., has been awarded the contract to grade yards for the Southern Ry. at Spencer. B. Herman, Washington, D. C., is chief engineer.

Okla., Miami.—Joplin & Pittsburgh Ry. Co. denies recent report that it has surveyed for an interurban railway from Columbus, Kans., to Miami. It is, however, understood that residents of Columbus have had survey made. The Board of Trade at Columbus may be able to give information. Century Engineering

& Construction Co. of Joplin, Mo., is reported planning the line, 22 mi. George Thayer is secretary.

S. C., Charleston.—Carolina, Atlantic & Western Ry. Co., capital \$2,525,000, is incorporated, representing merger of the North & South Carolina, the South Carolina Western, the South Carolina Western Extension and the Charleston Northern railroads, which latter is now under construction from Charleston to Andrews, S. C., 57 mi. W. R. Bonsal of Hamlet, N. C., is Pres. and Treas.; D. T. McKeithan of Darlington, S. C., V.-P.; S. O. Bauersfeld of Hamlet, S. C., other directors being S. Davies Warfield of Baltimore, R. H. Inness Brown and W. Redmond Cross of New York, R. L. Warner of Boston, George E. Dargan and Bright Williamson of Darlington, J. A. Lawton of Hartsville, S. C., and J. W. McCown of Florence, S. C. This is a formal consolidation of lines already related, Mr. Bonsal being president of the individual companies merged.

Tenn., Bulls Gap.—Southern Ry. is surveying for a contemplated extension from Bulls Gap to either Leadvale, Newport or Bridgeport, Tenn., about 20 mi. W. B. Crenshaw, Knoxville, Tenn., is Prin. Asst. Engr.

Tenn., Chattanooga.—Wauhatchie Ry. Extension Co. has applied for charter to build 5 mi. from Wauhatchie to Chattanooga, including 1 bridge of either steel or concrete over Chattanooga Creek. Country rough; incorporators, Chas. A. Lyerly of Chattanooga, Henry Fonde of Knoxville, E. Watkins, W. H. Watkins and W. B. Otto. Date to open bids for construction not set. Connection with Southern Ry. Mr. Lyerly is Pres.; H. C. Ansley, Treas.; F. S. Wynn, Secy.; W. H. Wells, Ch. Engr. of Construction, all of Washington.

Tenn., Harriman.—Morgan-Fentress Ry. Co. proposes to build 50 mi. from Nemo to Jamestown, Tenn., northwest. There will be 2 bridges and 1 tunnel. Wm. A. Henderson, Washington, D. C., is Pres.; F. H. Enright, Harriman, Tenn., V.-P. and Gen. Mgr.; H. W. Montague, Boston, Mass., Treas. and Secy.; George H. Jackson, Monterey, Tenn., Ch. Engr.

Tenn., Humboldt.—The plan for a railroad from Humboldt, Tenn., to Mayfield, Ky., is being promoted by R. H. McNeely, and line would be about 80 mi. long via Gibson Wells, Brazil, Eaton, Kenton, Martin, etc. Survey is not complete; in fact, the movement has just begun.

Tex., Denison.—Texas Traction Co., operating interurban from Denison to Dallas, is authorized to build double track on Main St. or single track on Woodward St., this being conditioned upon the erection, as proposed, of a terminal station at Woodward St. and Houston Ave. R. B. Stichter is Gen. Mgr.

Tex., Fort Worth.—Northern Texas Traction Co., which has now completed 7 mi. of second track from Fort Worth to Handley, will continue this double-tracking toward Dallas. G. H. Clifford is vice-president and manager at Fort Worth.

Tex., Fort Worth.—R. O. McCormack, Secy. Chamber of Commerce, says it has no reliable information relating to the proposed construction of an electric interurban railway from Fort Worth to Mineral Wells. This refers to a recent press report that its construction would be undertaken.

Tex., McKinney.—It is proposed to build an interurban railway from McKinney via Blue Ridge to Bonham, Tex., about 40 mi. Among those interested are John L. Lovejoy, W. B. Newsome, R. L. Waddill, S. D. Heard, F. B. Pope, L. A. Scott, R. C. Merritt, J. R. Gough and J. P. Crouch, all of McKinney. Stock subscriptions are also sought in Bonham.

Tex., Rusk.—Several washouts have occurred on the Texas State R. R. between Herring Station and Palestine, ranging from 30 to 300 ft. long and from 1 to 20 ft. deep. Repairs are expected to require several weeks' work. J. E. Stubblefield, Rusk, Tex., is superintendent.

Tex., Weldon.—While the Missouri, Kansas & Texas Ry. contemplates an extension of the Beaumont & Great Northern R. R. ultimately from Weldon to Waco, Tex., there is no intention, according to an official utterance, to do anything in that direction at present. This refers to a late press report.

Va., Clinch.—Sulphur Springs Lumber Co. of Clinch will build a tram railroad 7 mi. long.

Va., Suffolk.—Suffolk Business Men's Association is interested in a plan to secure construction of an electric railway to Petersburg. M. W. Joyner is Pres.

W. Va., Morgantown.—Morgantown & Wheeling Ry. has awarded contract to Keeley Bros. & Gilmore of Morgantown for the masonry and grading of the extension from Cassville to Blacksburg, W. Va., 14½ mi., the

work to be finished by Oct. 1 next. Robert D. Hennen is chief engineer at Morgantown.

W. Va., Parkersburg.—West Virginia Securities Co. has been organized to build the proposed Charleston, Parkersburg & Northern R. R., with offices in the Union Trust Building; Prest, E. H. Watson of South Bend, Ind.; V.-P., Henry H. Archer; Secy. and Treas., K. B. Stephenson, both of Parkersburg, other directors being C. B. Kefauver and R. C. Stapleton. John Marshall is counsel.

W. Va., Wheeling.—Surveys are reported being made for a coal railroad to connect Clinton, West Liberty, Bethany and other points. R. B. Naylor, Secy. Wheeling Board of Trade, may give information.

W. Va., Williamson.—Tug River & Kentucky R. R. Co. will build bridge over Tug Fork of Big Sandy River and a line about 1½ mi. long up Blackberry Creek, in Pike county, Kentucky. Estimated cost of bridge \$116,000; of line about \$50,000. N. D. Maher, V.-P. Norfolk & Western R. R., Roanoke, Va., and other officials of that road are interested.

STREET RAILWAYS

Va., Graham.—Appalachian Power Co. has been granted a franchise to build an extension of its street railway to West Graham, one mi.; also for a belt line around the fair grounds. Herbert Markle, Bluefield, W. Va., is general manager.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Air Compressors.—Alexander Bros. & Co., Cadiz, Ky.—Data and prices on air compressors.

Air Compressor.—Sugar Loaf Creamery Co., Mt. Carmel, Ky.—Air compressor.

Air Compressor.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish miscellaneous lot air compressor, etc., schedule 6635; delivery Mare Island, Cal.; for copies of schedules apply to navy pay office nearest navy-yard.

Asphalt Paving Plant.—S. E. Morris Co., 1022 Royster Bldg., Norfolk, Va. (for client).—Fully-equipped second-hand asphalt paving plant.

Bank Fixtures, etc.—Bank of Broadnax, Broadnax, Va.—Prices on safe, vault and other bank fixtures.

Baskets.—People's Loose Leaf Warehouse Co., Smiths Grove, Ky.—Prices on baskets for loose-leaf tobacco warehouse.

Boiler.—See Engine and Boiler, Bennettsville, S. C.

Boiler.—John G. Duncan Co., 306 W. Jackson Ave., Knoxville, Tenn.—Dealers' prices on second-hand 250 H. P. water tubular boiler.

Boilers.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish two 20 H. P. fire tube vertical boilers, schedule 6633; delivery Mare Island, Cal.; for copies of schedules apply to navy pay office nearest navy-yard.

Bolts, Hinges, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids Apr. 28 to furnish 120 3-in. square slip bolts and 40 rolls 105-in. wide templet paper, schedule 6644; delivery Philadelphia, Pa.; miscellaneous lot hinges (butt), schedule 6644; delivery New York and Philadelphia; 110 pairs 8 and 10-in. composition strap hinges and 110 pairs composition T hinges, schedule 6644; delivery New York; for copies of schedules apply to navy pay office nearest navy-yard.

Bricks.—E. R. Brown, 209 W. 13th St., Richmond, Va.—750,000 common bricks and 150,000 stock bricks.

Bridge Construction.—Brazoria County, J. W. Munson, County Judge, Angleton, Tex.—Bids until May 11 to repair concrete pier of steel highway bridge over Brazos River at Columbia; plans and specifications in offices of T. C. Tolman Engineering Co., Engr., Houston, Tex.

Bridge Construction.—Leonard Tillotson, care Seely National Bank, Seely, Tex.—Correspondence with bridge building companies relative to construction of steel bridge across Brazos River.

Bridge Construction.—Macon County Comms., F. J. Frederick, Chrmn., Oglethorpe, Ga.—Bids until Apr. 28 to construct reinforced concrete bridge across Beaver Creek; 90 ft. long; roadway 18 ft. wide; plans and specifications at office of County Comms.

Building Materials.—H. H. Vought & Co., 346 Madison Ave., New York.—Bids on plumbing, electric work, painting, roofing, skylights, marble, bronze work, glass, plastering, tile work, exterior marble, structural iron, ornamental iron, etc., for \$100,000 bank building at Parkersburg, W. Va.

Burner Manufacturers.—Frank S. Drury, Morgantown, N. C.—Correspondence with manufacturers relative to securing manufacture of patent to burn surface of roads hard like brick.

Canal.—Cabarrus County Drainage Dist. No. 2, A. F. Goodman, Secy., Concord, N. C.—Bids until Apr. 27 to construct drainage canal or ditch 7 ft. deep, 14 ft. wide and 13.2 mi. long; remove 261,411 cu. yds. earth and 341 cu. yds. rock excavation; plans and specifications at office Clerk Superior Court.

Canning Plants and Machinery.—C. J. Haden, Prest. Land Trust Co., also Prest. Georgia Chamber of Commerce, 1001 Hurt Bldg., Atlanta, Ga.—Prices on canning machinery and correspondence with parties prepared to build and equip canning plants in Georgia.

Cars (Dump).—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa.—Number of second-hand 4-yd., 2-way, 35-in. gauge K- & J. dump cars for Canada delivery.

Castings (Malleable).—G. A. Cole, Sanborn, Iowa.—Prices on malleable castings. (See Steel, etc.)

Cement.—E. R. Brown, 209 W. 13th St., Richmond, Va.—Cement in carload lots.

Cement, Brick, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids Apr. 28 to furnish at Port Royal, S. C., quantity of broken stone or gravel, building brick and Portland cement, schedule 6614; for copies of schedules apply to navy pay office nearest navy-yard.

Cement.—Geo. Sykes, Inc., 314 E. 34th St., New York.—Prices on cement for residence at Miami, Fla.

Chain Device.—Dr. Arthur E. Shaw, 1502 Hampton St., Columbia, S. C.—Correspondence with manufacturers relative to manufacturing patented device for keeping chains taut on wheels, especially on motor vehicles.

Clay.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish 300,000 lbs. fire clay in barrels, schedule 6646; delivery New York; for copies of schedules apply to navy pay office nearest navy-yard.

Clay.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish 50,000 lbs. fire clay in barrels, schedule 6649; delivery Mare Island, Cal.; for copies of schedules apply to navy pay office nearest navy-yard.

Coal.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids until Apr. 28 to furnish quantity of bituminous coal, schedule 6600; delivery Naval Hospital, Chelsea, Mass., and Great Lakes, Ill.; for copies of schedules apply to navy pay office nearest navy-yard.

Computing Scales.—Otto F. Mack, Auf dem Halgst No. 36-38, Stuttgart, Germany.—Correspondence (view to agency) with manufacturers of computing scales.

Concrete Machinery.—Moore & Brum-below, Lafayette, Ga.—Prices on small concrete mixer; also patterns for making concrete vaults.

Concrete Wall.—Ohio County Comms., Wheeling, W. Va.—Bids until Apr. 18 to construct concrete wall near Terrill's Bridge

on National Rd.; plans and specifications at office of Comms.; Geo. W. Steenrod, County Road Engr.

Contractor's Plant, etc.—Geo. Sykes, Inc., 314 E. 34th St., New York.—Prices on certain items of plant and equipment, contractor's supplies, etc., for residence at Miami, Fla.

Copper Still.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish copper still, schedule 6639; delivery Washington, D. C.; for copies of schedules apply to navy pay office nearest navy-yard.

Crane Runway.—Navy Dept., Bureau Yards and Docks, H. R. Stanford, Chief Bureau, Washington, D. C.—Bids until May 9 for crane runway and supporting columns and girders for building 77 at Navy-yard, Boston, Mass.; plans and specifications on application to Bureau or to Commandant of navy-yard named.

Crusher.—E. B. McCall, County Judge, Camden, Ark.—Prices on crusher; to crush brown hematite, etc., for road purposes.

Derrick.—See Loader (Log.)

Dories.—Office of Lighthouse Inspector, New Orleans, La.—Bids until Apr. 29 to furnish two 20-ft. power dories. Information on application.

Dredging.—Bids at U. S. Engr. Office, 325 Custom-house, New Orleans, La., until Apr. 30 to dredge in Bayou Teche between Keystone Lock and Jeanerette; information on application; Edw. H. Schulz, Maj., Engrs.

Drill Press.—G. A. Cole, Sanborn, Iowa, Gang drilling press.

Electric Plant.—M. J. Hoenig, Niagara Falls, N. Y.—Prices on electric-light plant to operate 250 lights for hotel at West Palm Beach, Fla.

Electrical Machinery.—B. W. Davis & Son, Heber Springs, Ark.—Prices on 20 H. P., 220-volt, 3-phase, 60-cycle electric motor.

Elevator.—O. V. Ault, Moundsville, W. Va.—Prices on hand elevator of about 700 lbs. capacity.

Elevator Doors.—Averhill & Adams, 719 Union Trust Bldg., Washington, D. C.—Prices on counterbalanced elevator doors for 360,000 warehouse.

Electric-light Plant.—R. G. Franklin, Mayor, Mansfield, Ga.—Prices on materials, including fixtures, wire, insulators, etc., for electric-light plant to carry current 8 mi.

Electric Lighting.—T. F. Reynolds, Mayor, Canton, N. C.—Bids until Apr. 27 to install electric-lighting system for 5 years, beginning May 1; not less than 10 arc lights of 700 C. P. each, and not less than 25 arc lights of 100 C. P. each.

Electrical Machinery.—See Waterworks and Electrical Machinery.

Elevator.—W. T. Chapin, Newport News, Va.—Prices on freight elevator, hand-power, for 3-story and basement apartment, office and store building.

Engine (Gasoline).—W. M. Williams, Junction City, Ark.—Bids July 1 on 6 or 8 H. P. gasoline engine.

Engine and Boiler.—Jas. A. Drake, Bennettsville, S. C.—75 to 100 H. P. second-hand engine and boiler; both good condition and complete; for brick mill.

Expansion Joints.—City of Webster Groves, Mo., J. D. Wilson, Clerk.—Prices on armor plate expansion joints.

Ferry Approach.—Harris County, H. L. Washburn, Auditor, Houston, Tex.—Bids until Apr. 27 to construct approach to Lynchburg Ferry, according to plans and specifications by County Engr.

Fire Escape.—Columbus Coca Cola Bottling Co., 6th Ave. and 12th St., Columbus, Ga.—Fire escape for Terminal Inn.

Floor Covering.—W. T. Chapin, Newport News, Va.—Prices on covering for concrete floor.

Films.—Comptoir General d'Exportation, 62 Rue d'Hauteville, Paris, France.—Addresses of manufacturers of and dealers in sensitive films.

Furnace.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish heat-treating portable oil-burning furnace, schedule 6641; delivery Norfolk, Va.; for copies of schedules apply to navy pay office nearest navy-yard.

Gaskets.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids Apr. 28 to furnish 10,250 rubber gaskets, schedule 6643; delivery Washington, D. C.; for copies of schedules apply to navy pay office nearest navy-yard.

Glass-works Equipment.—Wm. T. Cotter, 6 Park Bldg., Jacksonville, Fla.—Data and cost of installing factory to manufacture window glass, bottles, tumblers, etc.

Grading.—Hospital, Dept. of Interior, Lewis C. Laylin, Asst. Secy., Washington, D. C.—Receives bids until Apr. 30 for grading work at Government Hospital for Insane, in accordance with drawings and specifications; copies obtainable on application to Chief Clerk.

Grading, etc.—City, D. B. Renfro, Jr., Secy., Bank of Commerce Bldg., Little Rock, Ark.—Bids until Apr. 16 for certain grading, guttering and drainage work; plans and specifications on application to Supt. of Public Works, City Hall.

Grading and Graveling.—Harris County, H. L. Washburn, Auditor, Houston, Tex.—Bids until Apr. 16 to grade Addicks and Katy Rd. and place thereon 15,000 yds. gravel; grade Washington county road and place thereon 5600 cu. yds. gravel; Howe & Wise, Engrs., First National Bank Bldg., Houston.

Gravel.—Harris County, H. L. Washburn, County Auditor, Houston, Tex.—Bids until Apr. 15 on 4800 cu. yds. road gravel, f. o. b. Alief, Tex.; for grading road and placing 4800 yds. gravel about 4 mi. on road from Westheimer Rd. to Alief; 15,000 cu. yds. road gravel, f. o. b. cars at Katy, Burnap, Barker and Addicks, as directed by engineers; 5600 cu. yds. road gravel, f. o. b. cars Burton, Switch and Waller; also for grading and placing material on East Montgomery and Aldine county road; for grading and placing material on East Montgomery and Westfield road; for grading and placing material on Westfield and Humble road; Howe & Wise, Engrs., First National Bank Bldg., Houston.

Gymnasium Equipment.—Branch Bock, Blacksburg, Va.—Prices on gymnasium equipment for \$7000 field house and gymnasium for Virginia Polytechnic Institute.

Heating Plant.—E. M. Payne, Beckley, W. Va.—Prices on hot-water or steam-heating plant.

Heating Plant.—Board of Public Safety, Ed. T. Tierney, Chmn., St. Helens, Ky.—Bids until Apr. 21 to erect boiler-house and steam-heating plant for Home for Aged and Infirm; drawings and specifications at office of John H. Thomas, Archt., 511 Keller Bldg.

Heating Plant.—H. H. Vought & Co., 346 Madison Ave., New York.—Bids on heating plant for \$100,000 bank building at Parkersburg, W. Va.

Hoists.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish 4 hoists, three 2000 lbs., one 4000 lbs., schedule 6634; delivery Puget Sound, Wash.; for copies of schedules apply to navy pay office nearest navy-yard.

Hoisting Engine.—S. M. Price Machinery Co., 36 Commercial Pl., Norfolk, Va.—50 H. P., D. C., D. D. hoisting engine, complete with boiler; state where can be seen.

Hoisting Machinery.—L. F. Hobbs, Norfolk, Va.—Gasoline hoister; double drums, 20 H. P., first-class, second-hand.

Ice Machinery.—H. E. Johns, care H. E. Johns & Co., Columbus, Miss.—Addresses of manufacturers of ice machinery.

Ice Plant.—M. J. Hoenig, Niagara Falls, N. Y.—Prices on 2-ton ice plant for hotel at West Palm Beach, Fla.

Ice Machinery.—C. J. Haden, Prest. Land Trust Co., Atlanta, Ga., also Prest. Georgia Chamber of Commerce, 1001 Hurt Bldg., Atlanta, Ga.—Prices on ice machinery and correspondence with companies contracting to build and equip ice plants in Georgia.

Iron (Gray).—See Steel, etc., Sanborn, Iowa.

Iron.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish 50,000 lbs. pig-iron for semi-solid castings, schedule 6635; delivery Puget Sound, Wash.; for copies of schedules apply to navy pay office nearest navy-yard.

Knitting Machinery.—Frank S. Drury, Morganton, N. C.—Prices on knitting machinery; operate by 18 H. P. water-power plant.

Laboratory Equipment.—Board of Awards, John Hubert, Acting Prest., Baltimore, Md.—Bids until Apr. 22 to furnish and install complete laboratory equipment in new health department on Courtland St.; drawings and specifications at office of Commr. of Health, Dr. Nathan R. Gorter.

Lamp Black Machinery.—C. P. Smith, First State Bank, Oklahoma City, Okla.—Addresses of manufacturers of machines for making lamp black from natural gas.

Lathe.—Asheville Supply & Foundry Co., Asheville, N. C.—16x10-in. quick change lathe, A1 condition; give data and price first letter.

Lead.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids Apr. 28 to furnish 2100 lbs. No. 1 pig lead, schedule 6647; delivery Melville Sta., R. I.; for copies of schedules apply to navy pay office nearest navy-yard.

Levee Construction.—Levee Board, Clarksdale, Miss.—Bids until Apr. 16 to construct following levee enlargement: Levee sections 12 to 21, inclusive, except newly completed work on sections 15-16, in DeSoto and Tunica counties, about 703,000 cu. yds.; sections 64 to 68, inclusive, in Coahoma county, about 676,000 cu. yds.; T. G. Dabney, Chief Engr., Clarksdale.

Lighting Fixtures.—O. V. Ault, Moundsville, W. Va.—Prices on electric fixtures.

Lime.—E. R. Brown, 209 W. 13th St., Richmond, Va.—Lime in carload lots.

Loader (Log).—Anthony S. Hill, Randolph Bldg., Memphis, Tenn.—Second-hand standard-gauge self-propelling American or Browning swinging-boom log loader or derrick.

Lockers.—Branch Bock, Blacksburg, Va.—Prices on steel lockers; 12x12x36 in.; about 400.

Lumber.—Branch Bock, Blacksburg, Va.—Prices on lumber for \$7000 field house and gymnasium for Virginia Polytechnic Institute.

Lumber.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish 10,000 ft. 1½-in. firsts and seconds domestic white oak, schedule 6648; delivery Mare Island, Cal.; for copies of schedules apply to navy pay office nearest navy-yard.

Machine Tools.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 19 to furnish motor-driven engine lathe, double motor-driven emery grinder, motor-driven upright drill press and motor-driven column shaper, schedule 6638; delivery Mare Island, Cal.; for copies of schedules apply to navy pay office nearest navy-yard.

Mattresses.—Harris County, H. L. Washburn, Auditor, Houston, Tex.—Bids until Apr. 27 to furnish 146 mattresses for county jail; 6 ft. long, 2 ft. 6 in. wide, 6 in. deep, covered with heavy ticking, filling to be "A" linters.

Metal Ceiling.—W. T. Chapin, Newport News, Va.—Prices on marbleoid or similar metal ceiling for 3-story and basement apartment, office and store building.

Metal Fence.—St. Lucie County Commissioners, J. E. Fultz, Clerk, Fort Pierce, Fla.—Bids May 5 to furnish metal fence and concrete foundation for county jail. Information on application to R. Whyte, Fort Pierce.

Metal Sash.—Averill & Adams, 719 Union Trust Bldg., Washington, D. C.—Prices on metal sash for \$60,000 warehouse.

Meters.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish 2 multiple meters, schedule 6633; delivery Mare Island, Cal.; for copies of schedules apply to navy pay office nearest navy-yard.

Milling Machine.—Asheville Supply & Foundry Co., Asheville, N. C.—No. 3 or 3A Brown & Sharp milling machine, A1 condition; give data and price first letter.

Mining Machinery.—See Pumping Equipment.

Mixers (Concrete).—See Concrete Machinery.

Office Supplies, etc.—Otto F. Mack, Auf dem Hagst No. 36-38, Stuttgart, Germany.—Correspondence (view to agency) with manufacturers of office supplies, stationers' specialties, etc.

Oil.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 15 to furnish 1,350,000 bbls. fuel oil, schedule 6645; delivery East and West; for copies of schedules apply to navy pay office nearest navy-yard.

Paving.—Dallas County Court, Dallas, Tex.—Bids May 2 to pave Dallas-Oak Cliff viaduct; specifications at office of J. F. Witt, County Engr.; \$75,000 bonds voted.

Paving.—E. B. Bonney, City Secy., Houston, Tex.—Bids until Apr. 13 to pave Webster Ave. from Crawford to St. Emanuel Sts.; grade and pave McGowan Ave. from east line of Main St. and west line of Crawford St.; E. E. Sands, City Engr.

Paving.—City, D. G. Leahy, Recorder, Knoxville, Tenn.—Bids until Apr. 27 to pave

Gay St. from Hill to Jackson Aves. for Improvement Dist. No. 101; about 11,724 sq. yds. of standardized material; plans and specifications at office of City Engr.

Paving.—City of Webster Groves, Mo.—Bids Apr. 27 to construct 15,000 sq. yds. concrete paving; R. L. Mook, Engr., City Hall.

Paving.—E. B. Bonney, City Secy., Houston, Tex.—Bids until Apr. 18 to pave portions of Wilson, Andrews and Robin Sts., and Polk Ave.; E. E. Sands, City Engr.

Paving.—E. B. Bonney, City Secy., Houston, Tex.—Bids until Apr. 20 to pave Louisiana St. from north line of Dallas Ave. and south line of Capitol Ave. with the following materials as shall be selected: Trinidad sheet asphalt; asphaltic concrete; bitulithic; 3-in. wood block; 3½-in. wood block standard brick; vertical fiber brick, asphalt filler; Uvaide rock asphalt and Westrumite; E. E. Sands, City Engr.

Paving.—Wood County Commrs., Parkersburg, W. Va.—Bids until Apr. 15 to pave Camden Ave. and Broadway road in Tygart Dist.; bids on brick paving with concrete foundation and cement filler; concrete paving and Warren paving with Warrenite surface; Wm. Dudley, County Clerk.

Paving, etc.—Board of Awards, John Hubert, Acting Prest., Baltimore, Md.—Bids until Apr. 22 at office City Register, City Hall, to grade, curb and pave under contract No. 87 Baltimore St. from Liberty St. to Market Pl.; sheet asphalt, 12,400 sq. yds.; vitrified block, 650 sq. yds.; scoria block, 2350 sq. yds.; wood block, 15,400 sq. yds.; plans and specifications in office R. Keith Compton, Chmn. Paving Com., and Consult. Engr.

Paving, etc.—City of New Iberia, La., Alphe Fontelle, Mayor.—Bids until Apr. 15 to construct 110,000 sq. ft. concrete sidewalks and 33,000 lin. ft. concrete curb.

Paving.—E. B. Bonney, City Secy., Houston, Tex.—Bids until Apr. 15 to pave Franklin Ave. from Travis St. to Buffalo Bayou; E. E. Sands, City Engr.

Paving (Banquette, Curb, etc.).—A. G. Ricks, Commr., New Orleans, La.—Bids until Apr. 17 to banquette Henry Clay Ave. from Hurst to Perrier Sts.; also reline and reset existing banquette curb on both sides of N. Rampart St. from St. Louis St. to Esplanade Ave., in accordance with plans and specifications at office of City Engr.

Paving.—City of Florence, Ala.—Bids until May 4 to construct ½-mi. water-bound macadam street with concrete curb and gutter, and storm sewers; Lund & Hill, Consult. Engrs., Little Rock, Ark.

Paving.—City of Lake Arthur, La.—Bids until May 5 on 14,000 sq. ft. sidewalk and 1600 lin. ft. curb; T. H. Mandell, Engr., Lake Charles, La.

Paving.—Cape Henry Syndicate, W. D. Southall, Secy.-Treas., 400 Citizens' Bank Bldg., Norfolk, Va.—Bids invited on laying 1800 running feet granolithic sidewalks on section D at Cape Henry.

Paving.—City of Columbia, S. C.—Bids until Apr. 28 by John McNeal, City Engr., or by City Council, for about 60,000 sq. yds. street paving, with extension of concrete or granite curbs; bids received on sheet asphalt, bituminous concrete and bituminous macadam, on both 4-in. and 5-in. concrete foundation; kind and amount of each paving to be decided after proposals are submitted; specifications on application to City Engr.

Paving Materials, Piping, etc.—Dist. Commrs., 509 Dist. Bldg., Washington, D. C.—Bids until May 1 to furnish following materials during fiscal year July 1, 1914, to June 30, 1915: Asphalt paving blocks, repressed vitrified paving blocks and sewer invert bricks, castings, asphalt paving cement, Portland cement, granite curbing, limestone dust, road oils and tars, fuel oil, coal tar, paving pitch, terra-cotta sewer pipe, sand and gravel; specifications from Purchasing Officer, Room 330, Dist. Bldg.

Paving, Sewerage and Gas Pipe Lines.—City of Rocky Mount, N. C., C. H. Harris, Clerk.—Bids until May 5 on following: 40,000 sq. yds. asphaltic or other pavement; 10 mi. pipe sewers from 8 to 18 in. diam.; 10 mi. cast-iron gas pipe, 4 to 10 in. diam.; appurtenances; plans and specifications to be on file, Supt.'s office, Rocky Mount, and office of Gilbert C. White, Engr., Charlotte; copies of specifications on application to engineer.

Paving.—City of Newton, N. C., G. A. Warlick, Mayor.—Ready to receive bids by May 1 on bituminous macadam street work.

Pipe.—G. A. Cole, Sanborn, Iowa.—Prices on 1-in. and ¾-in. extra heavy pipe.

Pipe.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen.,

Washington, D. C.—Bids May 12 to furnish miscellaneous lot galvanized pipe, threaded end and couplings, schedule 6633; delivery Puget Sound, Wash.; for copies of schedules apply to navy pay office nearest navy-yard.

Pipe Lines.—City of Rocky Mount, N. C., C. H. Harris, Clerk.—Bids until May 5 on 10 mi. cast-iron gas pipe lines, 4 to 10 in. diam. (See Paving, Sewerage and Gas Pipe Lines.)

Pipe-threading and Cutting Machines.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish 2 pipe-threading and cutting-off machines, schedule 6641; delivery Norfolk, Va.; for copies of schedules apply to navy pay office nearest navy-yard.

Piping and Fittings, etc.—Isthmian Canal Com., F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Apr. 30 to furnish cast-iron water pipe and fittings, valves, nails, water coolers, drinking glasses, leather, cotton sheeting, railway flags, rules, record books, binder's board, pad board, chipped soap, silica sand, calcium carbide, chloride of lime, turpentine, linseed oil, lard oil, gasoline, varnish, shellac and chrome yellow; blanks and general information relating to this circular (\$42) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Piping and Valves.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids Apr. 28 to furnish miscellaneous lot cast-iron pipe and fittings, gate valves and extension valve boxes, schedule 6647; delivery Navy-yard, Melville Sta., R. I.; for copies of schedules apply to navy pay office nearest navy-yard.

Pulleys.—Frank S. Drury, Morganton, N. C.—Prices on pulleys.

Pumps.—Alexander Bros. & Co., Cadiz, Ky.—Data and prices on deep well pumps.

Pumping Equipment.—Farmers & Merchants' Transportation Co., 8011 S. Broadway, St. Louis, Mo.—Equipment for sand and gravel pumping.

Range Boilers, Bathtubs, etc.—Isthmian Canal Com., F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Apr. 24 to furnish range boilers, water-closets, bathtubs, lavatories, sinks, drainboards, shower heads, shower stops, brass elbows and lumber; plans and general information relating to this circular (No. 843) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Refrigerating Plant.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 19 to furnish miscellaneous lot refrigerating plants, schedule 6637; delivery Mare Island, Cal.; for copies of schedules apply to navy pay office nearest navy-yard.

Reinforcing.—Geo. Sykes, Inc., 314 E. 34th St., New York.—Prices on reinforcing material for residence at Miami, Fla.

Road Construction.—Anne Arundel County, S. O. Tilghman, Clerk, Annapolis, Md.—Bids until Apr. 21 to construct section of State-aid highway between 5th Dist. line and Stewart's corner, distance of 1 mi.; E. T. Hayman, Road Engr.; plans and specifications at office State Roads Com., Garrett Bldg., Baltimore, Md.

Road Construction.—County Commrs., M. O. Overstreet, Chmn., Orlando, Fla.—Bids at office B. M. Robinson, Clerk, Circuit Court, until May 11 to grade and pave with brick Highway No. 1, 68,650 sq. yds.; No. 2, 22,100 sq. yds.; No. 3, 36,960 sq. yds.; No. 4, 84,500 sq. yds.; No. 5, 84,500 sq. yds.; separate bids; specifications, forms, etc., obtainable on application to Clerk of Circuit Court, or to G. R. Ramsey, Highway Engr., Orlando.

Road Construction.—Granite Highway Assn. of DeKalb County, R. J. Freeman,

Road Commr., Decatur, Ga.—Bids May 4 to construct 18 mi. macadamized road with asphalt binder; C. S. Mercer, Engr.

Road Construction.—Highway Dept., Board of State Engrs., 164 New Orleans Court Bldg., New Orleans, La.—Bids until Apr. 20 to construct with gravel following main public highways: Bossier City to Natchez, 25 mi.; Old Shed Rd. to Red Chute bayou, 6 mi.; Bossier City to Benton, 13 mi.; all in Road Dist. No. 1, Bossier parish; W. E. Atkinson, State Highway Engr.

Road Construction.—London County Board of Pike Commrs., C. H. Bacon, Chmn., London, Tenn.—Bids until Apr. 24 to grade, drain and surface with water-bound macadam about 7 mi. post road; plans and specifications on file office of Pike Commrs.; M. E. Worrell, U. S. Highway Engr.

Road Construction.—Madison County Highway Com., S. W. Brown, Secy., Marshall, N. C.—Bids until Apr. 29 to grade about 7.7 mi. earth road; section 1, 1.5 mi., 786 cu. yds. excavation; section 2, 2.7 mi., 15,800 cu. yds.; section 3, 1.7 mi., 7580 cu. yds.; section 4, 1.8 mi., 8000 cu. yds.; specifications, etc., office, Clerk Superior Court, Marshall; proposal forms with Highway Com.; J. B. Clingman, County Road Engr.

Road Construction.—Road Improvement Dist. No. 5, F. J. Schmutz, Secy., Little Rock, Ark.—Bids until Apr. 23 (extended date) at Mercantile Trust Co.'s Bldg. to extend 12th St. pike; plans and specifications in office of Hugh R. Carter, Engr. for Dist., New State Capitol.

Road Machinery.—Vermilion Parish, A. O. Landry, Secy., Police Jury, Abbeville, La.—Will need road machinery.

Road Materials, etc.—Harris County, H. L. Washburn, Auditor, Houston, Tex.—Bids until Apr. 27 as follows: (A) 7300 cu. yds. road gravel, f. o. b. cars; (b) hauling and placing about 7300 cu. yds. gravel on Houston-Clinton Rd. and grading said road about 4 mi.; (A) 2500 cu. yds. road gravel, delivery f. o. b. cars unloading track, M. K. & T. R. R., 7th St., Houston Heights, for grading 23th St., Sunset Heights to Houston Ave. extension; (b) for hauling 2500 cu. yds. gravel and placing same on above road and necessary grading and spreading; for 3500 cu. yds. reef shell, f. o. b. switch near Bruner, Tex., and for paving Roy St., etc.; (A) 6200 cu. yds. road gravel, f. o. b. streets, Smith, grading Harrisburg-Main St. Cutoff Rd.; (b) same f. o. b. point of origin; (c) hauling and placing 6200 cu. yds. gravel and grading 4 1/2 mi. Harrisburg-Main St. Cutoff Rd.; for hauling, grading and placing 3500 cu. yds. shell, paving Roy St. from Klam St. to Long St., 2 blocks to Gentry; Gentry, 4 blocks; Thompson, 7 blocks, beginning at Washington and running north; Patterson, 8 blocks; for construction of Navigation Blvd. complete, material to be reef shell, about 3300 cu. yds., and bid to include material, hauling, grading and construction; plans and specifications at office Howe & Wise, Engrs., First National Bank Bldg., Houston.

Roofing.—Branch Bocock, Blacksburg, Va.—Prices on roofing for \$7000 field house and gymnasium for Virginia Polytechnic Institute.

Scales.—People's Loose Leaf Warehouse Co., Smiths Grove, Ky.—Prices on scales for loose-leaf tobacco warehouse.

Scows.—U. S. Engr. Office, J. C. Oaks, Maj., Engrs., Louisville, Ky.—Bids until May 9 for steel dump scows. Information on application.

Seating.—Baptist Church (T. J. Matthews to be addressed), Sylacauga, Ala.—Prices on seating for \$20,000 church building.

Sewers.—E. B. Bonney, City Engr., Houston, Tex.—Bids until Apr. 13 to construct storm sewers on Eagle St. from Main to Fannin Sts.; E. E. Sands, City Engr.

Sewers.—City of Webster Groves, Mo.—Bids Apr. 20 to construct sewers; 17,500 ft. 8-in., 1500 ft. 10-in. and 1500 ft. 12-in. vitrified tile sewers; 39 manholes and 15 dush tanks, and complete septic tank; R. L. Mook, Engr., City Hall.

Sewers.—City of D. G. Leahy, Recorder, Knoxville, Tenn.—Bids until Apr. 17 to construct 470 lin. ft. 8-in. lateral sewers from 14th St. west to a connection with Third Creek main sewer; cast-iron and vitrified pipe; plans and specifications at office of City Engr.

Sewers.—City of Wharton, Tex.—Bids until Apr. 20 to construct storm and sanitary sewer on Richmond Rd. through Gallahar's addition to center of Caney St.; M. G. Rugeley, City Engr.

Sewer Construction.—See Paving, Florence, Ala.

Sewer Construction.—City of Rocky

Mount, N. C., C. H. Harris, Clerk.—Bids until May 5 on 10 mi. pipe sewers, 8 to 18 in. diam. (See Paving, Sewerage and Gas Pipe Lines.)

Sprinkler System.—E. M. Payne, Beckley, W. Va.—Prices on sprinkler system.

Sprinkler System.—Averill & Adams, 719 Union Trust Bldg., Washington, D. C.—Prices on sprinklers for \$60,000 warehouse.

Steel, etc.—G. A. Cole, Sanborn, Iowa.—Prices on 1 1/4-in. and 1 1/2-in. bar steel, gray iron, and malleable castings.

Steel.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish annual supply carbon and tungsten tool steel, schedule 6642; delivery Navy-yard, Philadelphia, Pa.; for copies of schedules apply to navy pay office nearest navy-yard.

Stone.—U. S. Engr. Office, Wilmington, N. C.—Bids until May 8 to furnish and deliver about 11,000 tons riprap stone, Wilmington; information on application; H. W. Stickle, Maj., Engrs.

Stone.—U. S. Engr. Office, H. W. Stickle, Maj., Engrs., Wilmington, N. C.—Bids until May 8 to furnish and deliver about 11,000 tons riprap at Wilmington. Information on application.

Street Sprinkler.—W. L. Moss, Mayor, Pineville, Ky.—Street sprinkler; send net prices and cuts.

Structural Steel.—Geo. Sykes, Inc., 314 E. 34th St., New York.—Prices on structural steel for residence at Miami, Fla.

Tanks.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish 7 tanks, schedule 6639; delivery Washington, D. C.; for copies of schedules apply to navy pay office nearest navy-yard.

Telephones.—M. J. Hoenig, Niagara Falls, N. Y.—Prices on 100 new or second-hand telephones for hotel at West Palm Beach, Fla.

Telescopes.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids June 16 to furnish 250 and 80 telescopes, schedule 6611; delivery f. o. b. works; for copies of schedules apply to navy pay office nearest navy-yard.

Tile (Roofing).—Baker & Holmes Co., Jacksonville, Fla.—Addresses of manufacturers of green clay tile for roofing.

Tile.—Geo. Sykes, Inc., 314 E. 34th St., New York.—Prices on hollow tile for residence at Miami, Fla.

Washers (Ore).—Rockbridge Manganese & Iron Co., Midvale, Va.—Prices on second-hand ore washer in good condition.

Water-works and Electrical Machinery.—City of Aransas Pass, Tex., Jesse J. Todd, Mayor.—Bids May 5 for cast-iron pipe and fittings, class B; standard fire hydrants; water-gate valves; tank and tower, 60,000-gal. capacity, 120 ft. to bottom of tank; 45 H. P. oil engine; 35 K. V. A., 3-phase, 60-cycle, A. C. generator; 25 H. P. oil engine; 18 K. V. A. generator; 500 G. P. M. 2-stage centrifugal pump; 300 G. P. M. triplex pump; switchboard; pole line material; cement, brick, sand and gravel, all C. L.; further information with M. Griffin O'Neil & Sons, 1505 Praetorian Bldg., Dallas, Tex.

Wood-splitting Machinery, etc.—Gehres & Schmidt, Karlsruhe I. B., Germany.—List of manufacturers of wood-splitting machinery with automatic self-feeding equipment, bundle wood machines, bundle wood cutters and wood-sawing machinery.

Water Wheels (Turbine).—W. A. Grimes, Sparta, Ga.—Correspondence with manufacturers of turbine water wheels.

Woodworking Machinery.—W. M. Williams, Junction City, Ark.—Bids July 1 to install 6 or 8 H. P. gasoline engine, jointer, band saw, drill press, etc.

Zinc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids Apr. 28 to furnish 625,000 lbs. sheet zinc, schedule 6643; delivery Washington, D. C.; 50,000 lbs. white zinc in oil, 100-lb. drums, schedule 6622; delivery Norfolk, Va.; for copies of schedules apply to navy pay office nearest navy-yard.

FINANCIAL NEWS

Galveston County Buys in Bonds.

John M. Murch, county auditor, Galveston, Tex., writes to the MANUFACTURERS RECORD: "In response to our advertisement the county purchased \$40,000 of 4 per cent. seawall and breakwater bonds from the following parties: Gabe

Block \$2000, at 99 flat; Marion Douglas \$1100, at 96.75 and interest; J. H. Atchison \$1000, at 97 and interest; same \$4000, at 97.50 and interest; same \$31,300, at 97.90 and interest." All the parties are residents of Galveston, which is the county-seat of Galveston county.

Bank Merger at Kansas City.

Announcement is made at Kansas City of the merger of the National Reserve Bank and the National Bank of the Republic, both of that place, under the name of the former. The consolidated bank will occupy the new Republic Building at the corner of 10th and Walnut streets. The capital is \$1,200,000 and surplus \$200,000. Deposits are more than \$10,000,000. J. T. M. Johnston, formerly president of the National Reserve, is now chairman of the board, and William Huttig, formerly president of the National Bank of the Republic, is president of the new institution. There are eight vice-presidents. J. L. Johnston is cashier, and there are five assistant cashiers. The last statement of the National Reserve Bank prior to the consolidation showed capital \$1,200,000; surplus and undivided profits, \$289,003; deposits, \$7,276,337. At the same time the statement of the National Bank of the Republic showed capital \$500,000; surplus and undivided profits, \$117,709; deposits, \$3,974,261.

LARGE MERGER IN BALTIMORE

Munsey Trust Acquires Equitable Mortgage—Total Resources Over \$6,500,000.

A deal has been closed under the terms of which the Munsey Trust Co. of Baltimore acquires the Equitable Mortgage & Trust Co., also of Baltimore, upon the payment to stockholders of \$125 per share, which was the amount paid in by them when the Equitable was formed in 1912, this payment representing \$100 par for the stock and \$25 for surplus. The terms of the merger require that two-thirds, or 5010 shares, shall be delivered to the Munsey Trust Co. for the price named, the purchaser also agreeing to buy the remaining shares at the same figure. The stock consists of \$750,500 capital, and there is a surplus of \$187,625, besides undivided profits of \$34,243. Formal assurance has been given that the requisite amount of stock will be immediately turned over to the Munsey Trust Co.

The Equitable Mortgage & Trust Co. was formed in the latter part of 1912 by President John R. Bland of the United States Fidelity & Guaranty Co. for the main purpose of issuing its 5 per cent. bonds against mortgages upon real estate in the South and Southwest, but it also conducted a trust and banking business in connection with this. Mr. Bland is president of the Equitable, the other officials being Robert S. Mooney, vice-president; Hugh L. Pope, treasurer; S. Taggart Steele, secretary, and Eugene Pennington, assistant secretary and treasurer.

E. L. Norton is president of the Munsey Trust Co. and Frank A. Munsey is chairman of the board. Other officers are R. Lancaster Williams and Ernest R. Roberts, vice-presidents; E. H. Worthington, treasurer; Wm. M. Baker, secretary; D. Stewart Ridgely and Charles Fisher, assistant secretaries and treasurers.

Total resources of the Equitable are \$3,364,635, and of the Munsey \$3,248,761. Deposits of the former are \$1,789,767 and of the latter \$2,233,000. Mr. Mooney will become a vice-president of the Munsey Trust Co.

FINANCIAL CORPORATIONS

Ala., Roy.—People's Bank chartered and incorporated; authorized capital \$25,000; paid

in \$15,000. W. M. Newton, Pres.; J. F. Bussey, V.-P.; D. M. Maxwell, Cash. Business began Apr. 1.

Ark., Fouke.—State Bank of Fouke chartered; capital \$10,000. J. W. Maxwell, Pres.; Allen Winham, V.-P.; P. P. Elam, Cash.

Fla., Jacksonville.—Exchange Bank & Trust Co., capital \$50,000 and surplus \$25,000, began business Jan. 8. W. H. Milton, Pres.; Clifford R. Allen, 1st V.-P. and Trust Officer; J. A. McLaurin, 2d V.-P.; Daniel A. Simmons, Secy. and Treas.

Fla., Melbourne.—Bills, Ewing & Nebft are organizing a new bank.

Fla., Pensacola.—National Bank of Commerce, capital \$300,000, will begin business May 1. R. W. Goodhart, Pres.; G. H. Malone, 1st V.-P.; Max L. Bear, 2d V.-P.; J. B. McNeill, 3d V.-P.; E. R. Malone, Cash.

Fla., Tribby.—Tribby State Bank Incptd.; capital \$15,000; will begin business about June 1, 1914. W. D. Devane, Pres.; W. A. Croft, 1st V.-P.; P. C. Mickler, 2d V.-P.; H. O. Byrd, D. B. T. Butts, J. J. Roller, W. H. Edwards, directors.

Ga., Rents.—Rents Banking Co. has filed application for charter; capital \$25,000. Incptas: A. W. Davidson, T. J. Taylor, A. E. Hadden, W. E. Beddingfield, Rents; S. T. Hall, E. D. White, J. M. Page and J. S. Adams, Dublin.

Ga., Savannah.—Equitable Loan and Sureties Corp. has applied for charter; capital \$25,000; incorporators, George S. Clarke, G. M. Rhodes, Jr., and S. H. Clarke.

Ky., Beechwood.—Metropolitan Fire Insurance Co., capital \$250,000, has filed articles of incorporation. Incorporators: G. A. Long, W. L. Hazlip, E. C. Morgan, J. P. Haswell, Jr., William Phillips, O. H. Skiles, J. E. Stephens, Smith T. Bailey, John M. Davis, Dan H. Russell, J. L. Richardson, H. O. Williams, J. W. Herring.

Ky., Paducah.—The Ohio Valley Fire & Marine Insurance Co. Incptd.; capital \$250,000; surplus, \$250,000; incorporators, Frank M. Fisher, W. A. Berry, E. G. Boone, Dr. H. G. Reynolds, W. F. Paxton, Abe L. Livingston, J. A. Rudy, G. R. Davis, Ed D. Hannan, Brack Owen, Dr. Frank Boyd, R. B. Phillips, J. L. Wolf, Auber Smith, James M. Lang, C. W. Emery, Louis F. Kolb, Dr. S. H. Winstead, Harry Meyers, all of Paducah, and J. C. Speight and L. Brewer of Mayfield, Ky. Business is to begin when \$100,000 is paid in.

La., Minden.—First National Bank is approved; capital \$50,000; directors, Lynn K. Watkins, S. F. Martin, L. P. Wren, P. L. Rathbun, A. Glass and W. M. Phillips.

La., New Orleans.—Provident Loan Society of Louisiana, capital \$500,000, is organized with Sidney F. Lewis, Pres.; Alden McLellan, V.-P.; J. P. Simmons, 2d V.-P.; Curtis C. Lewis, Mgr.; Abner C. Chappuis, Secy.-Treas. Offices will be in the Whitney-Central Bldg.

Miss., Indianola.—First National Bank has made application to organize; capital \$50,000; organizers, D. M. Quinn, Miss A. E. Boyer, Josie P. Heard, J. F. Craig, J. C. Baird and others.

Miss., Itta Bena.—First Savings Bank of Itta Bena will make application for charter; capital \$15,000. Incptas: M. V. Jones, U. Ray and others.

Mo., Allenton.—State Bank of Allenton Incptd.; capital \$10,000. Directors: R. E. Wengler, Pres.; Geo. Gross, V.-P.; George Renneby, Fred W. Rettler, F. A. Wengler, John Devine and Chas. Shuren. Robt. W. Koch is cashier. Business began Apr. 2.

Mo., Barnhart.—Farm & Dairy Bank is chartered; capital \$10,000. Directors: C. L. Barnhart, William Schmidt, Ferdinand Rachel, F. W. Langehennig, D. W. Murphy, Jules Baron and George P. Witte.

Mo., Brimson.—Taylor Township Bank is chartered; capital \$12,500; directors, T. P. Fulkerson, Hugh Nichols, Walter Peery, E. Wrt Fulkerson, E. W. Davidson, J. M. Walden and Enoch McClure.

Mo., Flinthill.—Flinthill Bank of St. Charles County is chartered; capital \$10,000. Directors: Mathias Sachs, John J. Boland, John McHugh, Henry Nathe and William A. Callahan.

N. C., Asheville.—Dixie Life Insurance Co., capital \$25,000, is Incptd. by Joseph S. Bradley, Frank M. Vaughan and others.

N. C., Hillsboro.—Farmers & Merchants' Bank of Hillsboro, capital \$100,000, \$10,000 paid in, is organized by O. J. Forrest, Charles J. Rosemond and John F. Johnston.

N. C., Wilkesboro.—Wilkesboro Building and Loan Association is organized with the following directors: Chas. H. Cowles, Pres.; W. H. Foster, V.-P.; Henry Reynolds, Secy.-Treas.; N. O. Smoak, J. C. Mitchell, C. M.

Sheets, P. E. Brown, A. R. Smith and Jos. M. Prevette. Business has begun.

Okla., Kiowa.—People's National Bank is approved; capital \$25,000; organizers, T. D. Edwards, S. C. Bryan, H. P. Ward, H. B. Rowley and D. G. Lacey. This succeeds Farmer's State Bank.

Okla., Edmond.—Edmond State Bank inceptd.; capital \$25,000; incorporators, E. H. Emmerson of Edmond, S. S. Emmerson and M. W. Emmerson of Britton.

Okla., Mead.—Farmers' State Bank chartered; capital \$10,000; business began Apr. 8. Directors: Green Thompson, Durant, Okla., Prest.; G. S. Bruce, V.-P.; D. E. E. Stubbs, Cash.; all of Mead.

Okla., Oklahoma City.—Cooke Building & Investment Co., capital \$300,000, inceptd. by Edna Earle Cooke, George L. Cooke, John W. Shartel.

S. C., Columbia.—United States Trust Co. commissioned; capital \$25,000. Petitioners: E. G. Cook and D. L. Cook.

S. C., Charleston.—Commercial National Bank, King and Wentworth Sts., Charleston, which is a conversion from the Commercial Savings Bank, is to be chartered; capital \$200,000; surplus \$51,000. Business is to begin as soon as charter is granted.

S. C., Columbia.—Central City Building & Loan Assn. commissioned; capital \$1000 to \$200,000. Petitioners: E. W. Crouch, J. E. McDavid and S. M. Busby.

S. C., Mayesville.—Citizens' Bank of Mayesville, capital \$15,000, has elected C. G. Rowland, Prest.; J. W. Cooper, R. F. Des Champs and W. S. Wheeler, V.-Ps.; George C. Warren, Cash. Directors: P. M. Tiller, Dr. W. M. Bradley, H. Weinberg, W. W. Player, Hugh Witherspoon, W. S. Chandler and C. Taylor.

Tenn., Erwin.—Bank of Erwin has made application to convert into the Erwin National Bank; capital \$25,000.

Tenn., Russellville.—First National Bank of Russellville chartered; capital \$25,000; C. J. Fuller, Prest.; J. H. Dean, Cash. This is a conversion of the Citizens' Bank of Russellville.

Tex., Fort Worth.—Fort Worth Building and Loan Association is organized with authorized capital of \$500,000. E. S. Hooper, Prest.; Harry A. Hurt, 1st V.-P.; H. I. Pincus, 2d V.-P.; James N. Sligar, Secy., and W. P. Andrews, Treas.

Va., Brodnax.—Bank of Brodnax inceptd.; capital \$15,000; J. R. Temple, Crichton, Va., is Prest.; incorporators, J. J. W. Dugger, E. Pennington, W. M. Ferd, A. J. Lambert and R. R. Seymour. Business is to begin between June 1 and 15.

W. Va., Cowen.—First National Bank of Cowen, capital \$25,000, is chartered; directors, Wm. Rogers, D. P. Kessler, J. N. Berthy, Sr., A. W. Babbitt and R. O. McCandless.

NEW SECURITIES

Ala., Gadsden.—Ordinance has been introduced in the City Council providing for an election to vote on \$100,000 street-paving bonds. Address Mayor Holcombe.

Ala., Montgomery.—Election is to be held in Montgomery county to vote on \$250,000 of bonds to pay off city debt. Address County Commrs.

Ala., Phenix.—\$15,000 water-works bonds are voted. Address The Mayor.

Ark., Prescott.—Election will probably be held in Nevada county to vote on road bonds. Address County Commrs.

Fla., Arcadia.—Bids will be received until noon Apr. 18 by Jas. O. Bickley, Supt. Public Instruction DeSoto County, for \$25,000 School Dist. No. 5 and \$25,000 School Dist. No. 3 5 per cent. 30-year bonds. Denomination \$1000.

Fla., Auburndale.—\$15,000 school bonds are purchased by John Nuveen & Co., Chicago. E. S. Anderson is Mayor.

Fla., Fort Myers.—Bids will be received until 11 A. M. Apr. 17 by Board of Education of Lee County, Joseph W. Sherrill, Secy., for \$15,000 School Dist. No. 5 and \$15,000 Dist. No. 3, Lee county, 5 per cent. 20-year bonds; denomination \$1000.

Fla., Fort Myers.—\$30,000 5 per cent. 19½-year street and sidewalk bonds were purchased by Duke M. Farson, Chicago.

Fla., Frostproof.—Election will be held in May to vote on \$15,000 school bonds Special Tax School Dist. No. 22. Address Board of Public Instruction.

Fla., Jacksonville.—Bids for \$1,500,000 4½ per cent. bonds to build docks will be received until 3 P. M. May 20. Dated Mch. 1, 1913; maturity Mch. 1, 1943. Denomination

\$1000. Address Walter P. Corbett, Chrmn. Board of Port Commrs.

Fla., Live Oaks.—\$70,000 Suwannee county high school bonds are voted. Address County Commrs.

Fla., Melbourne.—Bids will be received until 5 P. M. May 12 for \$5000 electric light and \$2000 street 6 per cent. 30-year bonds; denomination \$500; dated Jan. 1, 1914; maturity Jan. 1, 1944. Dr. V. A. Pierce is Mayor and J. V. E. Wilcs, City Clerk.

Fla., Monticello.—\$12,000 6 per cent. Jefferson county public instruction funding bonds have been purchased by Farson, Son & Co., Chicago and New York; denomination \$1000; dated Feb. 6, 1914.

Fla., Ocala.—\$75,000 5 per cent. 20-year bonds School Dist. No. 1 were purchased at premium of \$1 less \$1875 for bonds, attorney's fees, etc., by Weil, Roth & Co., Cincinnati, O.; denomination \$1000.

Fla., Orlando.—\$100,000 5 per cent. 30-year street-paving bonds were purchased by People's National Bank of Orlando at par and \$100 premium.

Fla., Passagrille.—\$11,000 6 per cent. 30-year improvement bonds were purchased Apr. 4 by American Bank & Trust Co., St. Petersburg, Fla., at 95; denomination \$1000; dated Jan. 24, 1914; James Henry, Town Clerk.

Fla., Pensacola.—Bids will be opened on June 15 for \$400,000 dock construction and \$100,000 belt-line railroad bonds. A. Greenhut is Mayor.

Fla., Pensacola.—\$18,500 4½ per cent. Escambia county courthouse and jail bonds, offered Apr. 7, were purchased by Mayer, Deppe & Walter, Cincinnati, at 98.03.

Fla., Tampa.—A \$200,000 bond issue for schools is being considered by trustees of the Tampa Dist. and School Board, Hillsboro county.

Fla., Tampa.—Question of issuing \$225,000 of bonds as follows is under consideration: To pay present indebtedness, \$50,000; new school building in Ybor City, \$30,000; \$40,000 for new Madison Street school; \$40,000 for new Tampa Heights school; \$25,000 for school at Moody Heights; \$25,000 for school building in or near Suburb Beautiful; \$5000 to move and improve present Heights school building for Harlem Heights; \$15,000 for negro school building in Hyde Park section. Marshall Moore is Supt. School Board, Hillsboro county.

Fla., West Palm Beach.—\$45,000 5 per cent. Road and Bridge Dist. No. 2, Palm Beach county, bonds have been purchased by E. P. Maule.

Ga., Americus.—The \$3000 municipal hospital improvement and \$7000 school building bonds to be voted on Apr. 29 are 30-year 5 per cents.; H. W. Weaver, Clk. and Treas.

Ga., Columbus.—Ordinance has been introduced in City Council providing for an issue of \$50,000 general improvement and park bonds. Address The Mayor.

Ga., Graymont.—\$15,000 Summit-Graymont school bonds are for sale. Address E. L. Smith, Treas. Emanuel County Institute.

Ga., Monroe.—\$19,000 5 per cent. 20-30-year bonds are voted. J. D. Kent is Clerk.

Ga., Thomasville.—Ordinance has been introduced in City Council providing for an issue of \$30,000 school bonds. Address Board of Education.

Ga., Tifton.—Election will be held May 12 to vote on the following 5 per cent. 29-year bonds: \$13,000 school, \$17,000 water-works, \$8000 city hall and fire department headquarters and \$7000 for fire-fighting equipment, fire-alarm system and furnishings for fire department. Address The Mayor.

Ky., Elizabethtown.—\$25,000 of graded school district bonds are voted. Address Board of Education.

Ky., Lexington.—City has for sale \$2049.48 6 per cent. street bonds; J. E. Cassidy, Mayor; Jas. J. O'Brien, City Clerk.

Ky., Ludlow.—Indications are that there will be no issuance of school bonds for some time, owing to the fact that the City Council failed to comply with the request of the Board of Education to call a special election for that purpose. H. J. Ordelmund, Secy., Board of Education. (Previously mentioned.)

La., Alexandria.—\$125,000 bonds Alexandria School Dist. No. 1, Rapides parish, were sold to the Hibernia Bank & Trust Co., New Orleans, and Cutter, May & Co., Chicago, at premium of \$3537.57.

La., Alexandria.—\$125,000 5 per cent. Dist. No. 1 high school building bonds were purchased by Hibernia Bank & Trust Co., New Orleans, at \$128,537.57. Denomination \$1000.

Dated Mch. 15, 1914; maturity each year thereafter. D. B. Showalter is Supt. and Treas., School Board.

La., Melville.—Election is to be held May 2 to vote on \$15,000 20-year electric-light-plant bonds. Address Board of Aldermen.

La., Shreveport.—\$175,000 5 per cent. Bossier parish road bonds were purchased at par by George W. and J. E. Pearsall of Oklahoma City.

La., Shreveport.—\$70,000 Vivian School Dist., Caddo parish, school-building bonds are voted. Address Police Jury.

Md., Baltimore.—Municipal Commrs. of Finance are considering the question of issuing at public sale \$5,000,000 of city stock.

Md., Cambridge.—Governor has signed bill authorizing bond issue for bridges in Dorchester county. Address County Commrs.

Md., Centerville.—Bill providing for street bond issue is signed by the Governor. Address The Mayor.

Md., Cumberland.—Bill authorizing \$150,000 street-improvement bonds is approved by the Governor. Address The Mayor.

Md., Cumberland.—\$10,000 5 per cent. 1-year Allegany county road bonds will be issued by Board of County Commrs.; denomination \$500; dated May 1, 1914; maturity May 1, 1915.

Md., Frostburg.—Governor has signed bill providing for bond issue. Address The Mayor.

Md., Frederick.—Bill authorizing bond issue is approved by the Governor. Address The Mayor.

Md., Hagerstown.—Bill providing for park bonds approved by the Governor. Address The Mayor.

Md., Hancock.—\$30,000 water-works bonds are voted. Address The Mayor.

Md., Mt. Airy.—Issue of \$86,000 water-works bonds is contemplated. Address The Mayor.

Md., Mount Rainier.—Election will be held Apr. 21 to vote on \$100,000 water and sewer bonds. Address The Mayor.

Md., Prince Frederick.—General Assembly of Maryland, 1914, passed a bill authorizing and directing the Commrs. of Calvert County to issue 6 per cent. coupon bonds in denominations of \$100 and \$1000, aggregating \$25,000; B. B. D. Bond, Prest. County Commissioners.

Md., Rising Sun.—Election will be held to vote on water and street bonds. Address The Mayor.

Md., Towson.—The election to vote on \$500,000 of school and \$15,000 sewer Baltimore county bonds will be held April 19. Address County Commrs.

Miss., Alhambra.—Election was recently held to vote on \$9000 school-building bonds. Address Board of Education.

Miss., Canton.—\$50,000 6 per cent. Madison county bonds, Third Supvrs.' Road Dist., were purchased by Bank of Commerce & Trust Co., Memphis. D. C. McCool, Chancery Clerk.

Miss., Collins.—Election is to be held in Covington county to vote on \$15,000 Seminary Dist. road bonds. Address County Commrs.

Miss., Hickory.—Bids will be received until Apr. 27 by M. G. Scarborough, Clerk, for \$10,000 6 per cent. 20-year school bonds.

Miss., Meridian.—Toledo (O.) bond brokers are reported to have purchased \$100,000 Lauderdale county road bonds. Address County Commrs.

Miss., Mississippi City.—Bonds are to be issued for school building in Mississippi City Rural School Dist. Address Board of Trustees.

Miss., Port Gibson.—Board of Supervisors, Calhoun county, will, it is reported, in May sell \$50,000 5 per cent. bonds for paying off floating indebtedness and replenishing the general fund of the county.

Miss., Port Gibson.—\$10,000 5 per cent. 20-year Clairborne county bridge bonds have been purchased by Hanchett Bond Co., Chicago.

Miss., Raymond.—\$125,000 road bonds, Dist. No. 2, Hinds county, are to be issued by Board of County Supervisors.

Miss., Vicksburg.—\$160,000 5 per cent. 16½-40-year Warren county road and bridge bonds were purchased at \$235 premium by Devitt, Tremble & Co., Chicago. J. D. Laughlin is Chancery Clerk.

Miss., Weir.—Bids are being received by J. R. Gladney, Mayor, for \$5000 6 per cent. school bonds; denomination \$500; dated July 1, 1914; maturity, \$500 July 1, 1924 to 1933.

Mo., Chillicothe.—\$10,000 water-works bonds defeated; W. L. Wanamaker, City Clerk.

Mo., Eldon.—\$18,500 4 per cent. 5-20-year

high-school building bonds, Eldon School Dist., Miller county, have been purchased by Mercantile Trust Co., St. Louis; denomination \$500; dated Apr. 1, 1914.

Mo., Kirkwood.—\$15,000 city hall and jail bonds were voted Apr. 7; Jas. B. Wilde, City Clerk.

Mo., Ozark.—The \$65,000 courthouse and \$10,000 almshouse 4½ per cent. 10-20-year Christian county bonds were purchased by Holtz & Co., Chicago.

Mo., Poplar Bluff.—\$20,000 school bonds are voted. Address School Board.

Mo., Springfield.—\$100,000 Greene county road bonds are soon to be placed on the market. Address County Commrs.

Mo., New Hampton.—Wm. R. Compton Bond Co., St. Louis, Mo., purchased at par the \$6000 5 per cent. 10-20-year school district bonds voted Mch. 21; denomination \$500; A. L. Clabaugh, Secy. School Board.

Mo., Ozark.—\$75,000 4½ per cent. 10-20-year Christian county building bonds are purchased by H. T. Holtz & Co., Chicago.

Mo., Webster Groves.—Bids will be received until 3 P. M. Apr. 23 by Board of Directors School Dist. Webster Groves for \$50,000 4½ per cent. 10-20-year high-school building bonds. Address F. B. Miller, Secy., 639 Tuxedo Blvd., Webster Groves.

N. C., Bethel.—\$5000 6 per cent. 30-year electric-light bonds voted Mch. 17 will probably be disposed of at private sale; J. E. Carson, Clerk Town Commrs.

N. C., Charlotte.—Hanchett Bond Co., Chicago, purchased at par \$11,000 Mecklenburg county drainage bonds.

N. C., Charlotte.—Commrs. Mecklenburg Drainage Dist. No. 6 are receiving bids for \$11,000 6 per cent. bonds; Jas. R. Alexander, Chrmn. Further particulars will be found in the advertising columns.

N. C., Clayton.—\$25,000 5 per cent. 30-year building bonds, Clayton Graded School Dist., were purchased by Hanchett Bond Co., Chicago; denomination \$1000; dated Jan. 1, 1914.

N. C., Elkin.—\$13,000 school-building bonds are voted. Address Board of Education.

N. C., Hertford.—Election will be held May 5 to vote on \$50,000 street, water and sewerage bonds. Address The Mayor.

N. C., Statesville.—Election will be held June 16 to vote on \$25,000 school-building bonds. Address School Board.

N. C., Scotland Neck.—\$10,000 6 per cent. electric-light bonds have been purchased at 103.26 by Security Savings Banks & Trust Co. of Toledo. A. L. Purrington, Clerk, Bond Commrs.

N. C., Taylorsville.—Election will be held June 9 to vote on \$100,000 Alexander county road bonds. Address County Commrs.

Okla., Collinsville.—\$4000 6 per cent. 25-year city hall extension and improvement bonds will be offered about May 1; dated May 1, 1914. Address The Mayor.

Okla., Drumright.—Water-works bonds were recently voted. Address The Mayor.

Okla., Kinsey.—\$20,000 4 per cent. 5-10-year, Mayes county, township bridge bonds were voted Apr. 7. Address County Commrs., Pryor, Okla.

Okla., McAlester.—Bids will be opened May 2 for \$30,000 5 per cent. 25-year park bonds, dated May 1; denomination \$1000; J. M. Gannaway, City Clerk.

Okla., Morris.—Election will be held Apr. 18 to vote on \$12,000 water-works and fire-apparatus bonds. Address The Mayor.

S. C., Beaufort.—Beaufort County Commrs. have authorized issue of bonds, amount not to exceed \$80,000, for building bridge.

S. C., Cades.—\$5500 Cades School Dist., Williamsburg county, bonds are voted. Address County Commrs.

S. C., Fort Mill.—Bids will be opened Apr. 21 for \$15,000 water-works bonds; dated May 1, 1914; maturity 1954; denomination \$1000; interest to be 5 or 6 per cent. J. J. Bailes, Secy. and Treas., Board of Public Works.

S. C., Ridgeland.—Election is to be held May 15 to vote on \$40,000 Jasper county courthouse and jail bonds. Address County Commrs.

Tenn., Athens.—\$30,000 5 per cent. 30-year funding bonds are voted. John W. Bayless is Mayor.

Tenn., Big Sandy.—Bids will be opened Apr. 13 for \$6000 5 per cent. school-building bonds; denomination \$100; dated Apr. 1; maturity \$1000 in 10-25-years and \$2000 in 30 years. Address T. C. Craney, Mayor.

Tenn., Bristol.—Blountville County Court has ordered the issuing of \$100,000 road bonds.

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Tenn., Brownsville.—\$121,700 5 per cent. Haywood county bonds were purchased at \$965 premium by Powell, Garard & Co., Chicago. James Tipton is Chrmn. County Court.

Tenn., Brownsville.—\$12,000 6 per cent. 30-year water-works bonds were purchased at \$395 premium by Mayer, Deppe & Walter, Cincinnati.

Tenn., Camden.—\$20,000 5 per cent. 20-year school bonds are being offered for sale; dated July 1, 1914. Address A. J. Utley, Recorder.

Tenn., Dresden.—\$27,000 6 per cent. 20-year water and light bonds are reported sold. Address The Mayor.

Tenn., Fayetteville.—Bids will be received until 3 P. M. May 12 for \$60,000 5 per cent. 10-20-year sewer bonds. Denomination \$500. Dated May 1, 1914; maturity May 1, 1914. Address J. M. Fulton, Mayor, or Hiram Higgins, Clerk. *Further particulars will be found in the advertising columns.*

Tenn., Jacksboro.—Campbell County Court has ratified the sale to John Divine & Co., Chicago, of \$30,000 5 per cent. 10-year school bonds voted last Jan.; denomination \$500.

Tenn., Lexington.—Election is to be held in Henderson county Aug. 6 to vote on \$200,000 highway bonds. Address W. F. Appleby, Judge County Court.

Tenn., Memphis.—Shelby county has under consideration the issuing of \$325,000 jail-construction bonds. Address County Comms.

Tenn., Memphis.—\$40,000 4½ per cent. 20-year school-building bonds are being offered at private sale; denomination \$1000; dated Jan. 1, 1914. Address A. B. Hill, Secy., Memphis Board of Education.

Tex., Alameda.—\$7000 Dist. No. 36, Alameda, Harris county, bonds have been voted and approved by Attorney-General. It is stated they will soon be offered. Address County Comms., Houston.

Tex., Austin.—Attorney-General has approved following securities: \$300,000 Harrison county road bonds; \$7000 Marshall City park bonds; \$42,000 street-improvement bonds

of Yoakum; \$100,000 5 per cent. 20-year drainage or storm sewer bonds, Houston; \$150,000 5 per cent. 10-40-year road bonds Comms. Precincts Nos. 1 and 2, Robertson county; \$125,000 courthouse and jail and \$35,000 5 per cent. 10-40-year Kleburg county hospital bonds; \$1000 5 per cent. 20-40-year bonds Clyde Independent School Dist.; \$3000 5 per cent. 10-20-year bonds Bosque common school dist. No. 52; \$15,500 5 per cent. 5-40-year bonds Richardson Independent School Dist.; \$200,000 5 per cent. 20-year bonds, Waco.

Tex., Beaumont.—Election will be held May 19 to vote on \$175,000 wharf and dock bonds. E. A. Fletcher is Mayor.

Tex., Belton.—City has for sale \$60,000 High school and \$30,000 bridge bonds. Neal Bassel is Mayor.

Tex., Belton.—Bids will be received until 10 A. M. Apr. 21 by Comms. Court, Bell County, W. E. Hall, Auditor, for \$600,000 5 per cent. 40-year bonds, with serial option to pay \$15,000 each year. *Further particulars will be found in the advertising columns.*

Tex., Berclair.—Steps are being taken to call an election to vote on school bonds. Address School Trustees.

Tex., Calvert.—Election will be held in near future to vote on \$5000 fireman's hall completion bonds. Address The Mayor.

Tex., Clifton.—Bids will soon be asked for \$35,000 5 per cent. 40-year Independent School Dist. bonds voted June 24, 1913; dated Aug. 1, 1913; denomination \$500; J. T. Glass, Prest.; R. S. Clement, Secy.

Tex., Cooper.—The \$5000 school bonds voted Mch. 24 are 40-year 5 per cents. Address H. E. Cabern.

Tex., Crockett.—\$18,000 5 per cent. 10-40-year water-works bonds are reported sold. J. Valentine, City Secy.

Tex., Cunningham.—\$5000 5 per cent. 20-year Independent School Dist., Lamar county, bonds were voted last month and are to be sold now; denomination \$100. Address Frank H. Bradley, Secy., Cunningham, Tex.

Tex., Dallas.—\$600,000 of school and \$50,000 sewer bonds are voted. Address Municipal Comms.

Tex., Elkhart.—\$8000 school bonds are voted. Address School Board.

Tex., Franklin.—\$17,500 water and light bonds are to be voted on Apr. 10. Address The Mayor.

Tex., Granger.—\$15,000 sewer bonds are voted. Address The Mayor.

Tex., Hillsboro.—\$18,000 water-works bonds are voted. Address The Mayor.

Tex., Kaufman.—Election will be held Apr. 16 to vote on \$300,000 Kaufman county road bonds. Address County Comms.

Tex., Longview.—\$135,000 5 per cent. 40-year water-works bonds have been purchased by Chicago and New York parties. G. A. Bohlen, is Mayor.

Tex., New Braunfels.—Comms. Court Comal county has authorized the issuing of \$15,500 additional road bonds.

Tex., Odessa.—Petition is being circulated in Ector county calling for an election to vote on \$50,000 road construction bonds. Address County Comms.

Tex., Post.—Bids will be received until Apr. 14 by J. M. Boren, Judge of Garza County, for \$50,000 5 per cent. 5-40-year road and bridge bonds.

Tex., San Angelo.—\$15,000 viaduct bonds are voted. Address The Mayor.

Tex., Snyder.—Election is soon to be held to vote on \$50,000 Scurry county road bonds. Address County Comms.

Tex., Terrell.—Improvement Dist. No. 1, Kaufman county, has voted \$80,000 levee bonds. Address Comms. Court, Kaufman.

Tex., Timpson.—\$17,000 water-works and \$10,000 street-improvement bonds voted Apr. 7 will be placed on sale May 1. B. J. Hawthorn, Mayor.

Tex., Webster.—\$12,000 Webster Dist., Har-

ris county, bonds are voted. Address County Comms., Houston.

Tex., Yoakum.—\$40,000 5 per cent. 20-40-year street-improvement bonds were purchased at par by the Yoakum State Bank. J. M. Haller is Mayor.

Va., Manassas.—\$75,000 public-improvement bonds are declared valid by Supreme Court of Appeals. Address The Mayor.

Va., Norton.—Town has for sale \$5000 5 per cent. 30-year street-improvement bonds. Address T. M. Pepper, Mayor, or G. A. Smith, Chrmn Finance Committee. *Further particulars will be found in the advertising columns.*

W. Va., Beckley.—Election is to be held in Town Dist., Raleigh county, to vote on road bonds. Address County Court.

W. Va., Parkersburg.—May 11 Clay Dist., Wood county, will vote on \$40,000 of bonds. Address County Comms.

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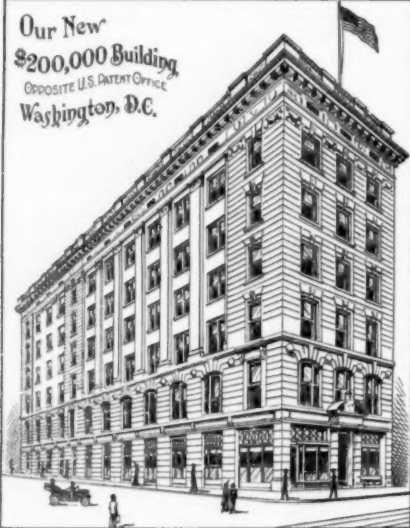
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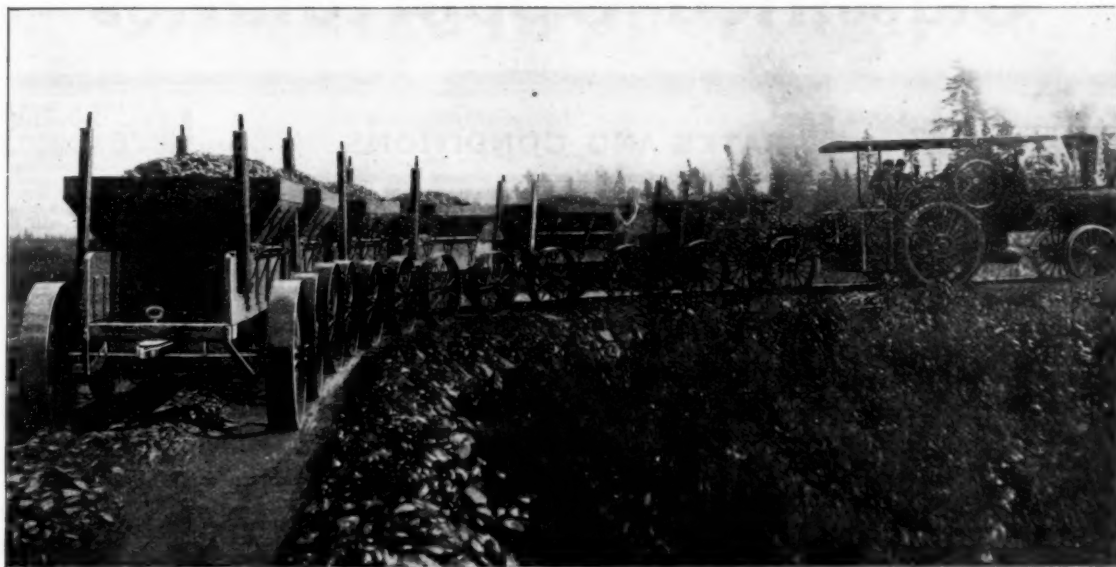
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Glenn A. Howe, self-registering valve stem.
Ell J. Davies, window-pane fastener.
James E. Bell, chopping and pounding implement.
James E. and Joseph F. Bennett, sash cord.
Wm. G. Bentley, time indicator.
Jacob B. Markel and George J. Carroll, film winding mechanism for moving-picture machine.
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Carl Von Hagel, Jr., oiling device.
John A. Wilson, paper clip.
Casper Vost, animal trap.
Dorsey S. Webb, heater.
Walter S. Weatherwax, steering wheel hub and axle connection.
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Ira F. Reed, bag holder.
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Earnest Bert Smith, rotary gas engine.
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William Chapman, safety poison bottle stopper.
Donnie C. Gramling, cotton planter.
Joseph Grasso, concrete slab.
Wm. M. Palmer, wrench.
Adolph Nelson, propeller sled.
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George W. Aurlinger, igniting device.
Wm. H. White, sand trap.
Charles W. Mitchell, pipe strap.
Arthur L. Kerlaugh, valve.
Wm. J. Morrison, pressure relief valve for pneumatic tire.

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Wm. A. Brewster, heater.
Jay V. Andrews, knee pad.
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Bradford E. Beers, lock.
Hellek S. Berge, anti-slipping device.
Arthur T. Ames, automatic coupling and air valve operating mechanism.
Anabelle M. Stover, milk bottle cover.
James W. Jones and Thomas M. Jerro, rail joint.
Otto Johnson and Nels Rundgren, non-refillable bottle.
Jacob K. Bue, fly trap.
Edward Flanagan, fire extinguisher.
Clinton Decker, device for cleaning ponds.
Anthony Ferraris, protractor.
Teobaldo Boldizzone, music-leaf turner.
Claude C. Lowe, checker board.
Lauritz B. Larsen, pocket knife.
Anelia LeFord, stocking and glove darning and mending last.
Emery Johnson, balance detector.
Frank P. Miller, bed attachment.
Homer W. Case, sifter.
George F. Tripp, fireplace.
John A. Pussinen, bed.
Carl E. Bower, window-screen.
Thomas A. Gebhardt, screen.
Wm. Gould, bolt.
Harry B. Carly, hose supporter.
Fred T. Harrigan, padlock latch.
Arvin Hopper, piano attachment.
John Johnson, railway safety device.

Luther C. Irvin, fruit picker.
Charles E. Ellis, snowshoe.
Frank Boebert, envelope.
Wm. Schoepke, safety device for pulley.
Samuel Segal, lock.
Anton G. Weir, attachment for sausage machine.
Wm. L. Ealy, ticket holder and match scratcher.
George E. Maxwell, attachment for blacksmith's vice.
Thomas B. Sitzler, internal combustion engine.
Thomas C. Ridge, attachment for rubber shoes.
Wm. C. Holland, automatic phonograph stopper.
Otto L. Weimar, railway tie.
Norman D. Urquhart, renewable cartridge fuse.
Werner Studer, conveyor apron.
Clifton W. Simmons, non-refillable bottle.
Elof Pehrson, door-operating mechanism.
Wm. B. Pettus, valve.
Perry L. Smith, rail splice.
Alva L. Doty, card game.
Charles Eckland, oil burner.
Francis M. Crossett, non-refillable.
Henry Guderjohn, dirigible headlight for vehicles.
Sebo Harms, safety saddle stirrup.
Gus M. Kaiser, razor guard.
Arthur J. Fish, window cleaner.
Charles E. Burke, safety device.



Six TROYS making a right-angled turn on a nine-foot road—a bit of evidence from Port Arthur, Canada.
Note that the last wagon tracks exactly with the engine.

IF WEATHER CONDITIONS WOULD PERMIT A HAUL OF 60 DAYS' CONTINUOUS WORK, WE WOULD HAVE

Enough Profit in Our Jobs to Pay for Twice as Many Troy Reversibles

J. R. Sutherlin & Co., of Kansas City, Mo., are probably doing more construction work than any firm in their section of the country. Here's what they have to say about Troy Reversibles—Doesn't it sound pretty good to you?

"With reference to the Reversible Wagons, will state we are using 19 of them and they are making us money. It is true the weather conditions have delayed us to some extent this fall, but that would have been the case in using any other kind of wagon. We are hauling with an 80-horse-power steam engine and pull from 7 to 8 three-yard wagons to a trip at a nominal cost. If weather conditions would permit a haul of 60 days' continuous work we would have enough profit in our jobs to pay for twice as many Troy Wagons as we own."

Troy Reversibles will make money for you, too. If you do big hauling, stop and consider for a moment what a 50 to 80 per cent. cut in your hauling cost would do to your profits. Make us prove up. Just ask for hauling book MR.

THE TROY WAGON WORKS COMPANY

106 E. Race Street, Troy, Ohio

DISTRIBUTORS:

G. C. Hodges, Brooklyn.
Standard Supply & Equip. Co., Phila.
Henry H. Meyer Co., Baltimore.
H. H. Hoover, Pittsburgh.
W. S. Brown & Sons, Birmingham.
A. Baldwin & Co., New Orleans.

So. Texas Implement Co., Houston.
W. M. Pattison Supply Co., Cleveland.
Hodson-Fernaughty Co., Portland.
E. R. Bacon & Co., San Francisco.
W. L. Cleveland & Co., Los Angeles.
Landes & Co., Salt Lake City.

Western Metal Mfg. Co., El Paso.
N. J. Dinnen & Co., Winnipeg.
Canadian Equipment & Supply Co., Calgary.
C. Paquet & Co., Quebec.
W. McNally & Co., Montreal.

Classified Opportunities

MEN WANTED

GRANITE DRAUGHTSMAN WANTED capable of making up setting plans, detailing and diagraming building and mausoleum work from architect's plans. Steady position in best town in the South, with good opportunity for an advancement. Address No. 1506, care Manufacturers Record, Balto., Md.

WANTED—At once, five foremen and three superintendents on a large road-construction job. All applicants must be well recommended. Work to be in Virginia. Apply to Berkeley & Schmidt, Richmond, Va.

AGENTS WANTED among supply dealers and salesmen for an exceptional house-lighting machine, suitable for small homes as well as large; simple, durable, economical; satisfaction guaranteed to customers; has excellent selling points; a live proposition. Write for terms. The Alexander N. Milburn Co., Baltimore, Md.

GOOD OPPORTUNITY is offered an experienced producer with ability to get a hearing with engineers and purchasing agents in industrial plants. This is not a salaried proposition. A man with a reasonable bank account can build a clientele with remuneration big enough to make a comfortable living within 60 days. Federal Graphite Mills, Cleveland, O.

WANTED—To correspond with one open for engagement who understands manufacture and canning of hominy and preparation of cereal foods. Edgar B. Marchant, Aline, Okla.

AGENCIES WANTED

GERMANY—We want to represent American manufacturers in Germany. H. Drawe & Co., Agents, Frankfurt o. M., Germany.

WANTED—Accounts with manufacturers desiring representation in supplies for fruit growers for Virginia; two years' experience in fruit industry. Address No. 1490, care Manufacturers Record, Balto., Md.

SPECIALTY LINE WANTED—I would like to secure the agency and represent some specialty concern that has an article of any kind with merit they wish to market. Address P. O. Box 789, Richmond, Va.

SALES AGENCIES WANTED—Manufacturer's agent in Memphis, Tenn., dealing in building materials, builders' specialties and contractors' equipment is desirous of adding a few more high-grade lines; wide experience; excellent facilities; references. Address P. O. Sorenson, 319 Scimitar Bldg., Memphis, Tenn.

WANTED—Sales agency for all lines pertaining to builders' specialties; East Tennessee as territory; can furnish satisfactory references to interested concern; modern warehouse facilities. Address Daniel Briscoe, Jr., 325-327 State St., Knoxville, Tenn.

WANTED—Several lines of building supplies to represent in Baltimore as manufacturers' agent. Address No. 1503, care Manufacturers Record, Balto., Md.

SITUATIONS WANTED

WILL consider proposition to travel as salesman for some reputable wholesale lumber company; prepared to give entire satisfaction. Address No. 1510, care Manufacturers Record, Balto., Md.

SUPERINTENDENT, married man, 13 years' experience in planning and building of large buildings, especially hotels, having helped plan and build three of the largest hotels in the South, in the past 3 years, having entire charge of construction, doing the concrete, stone, brick, terra-cotta and carpenter work, open for position May 1; strictly temperate; good organizer; can furnish best of references. Address No. 1511, care of Manufacturers Record, Balto., Md.

A CAPABLE executive man of large experience in both office and operative manufacturing work desires to change; preferably in the Southern States; best references. No. 1509, care Manufacturers Record, Balto., Md.

A-1 MASTER MECHANIC, now employed, wishes to change; would consider small railroad system, sawmill, phosphate mines construction; best of reference. Address No. 1504, care Manufacturers Record, Balto., Md.

MANAGING ENGINEER in reinforced concrete and general building construction desires to make good connection with well-established company needing services of thorough man who has been through all details of securing and complete handling of important building work. Address Manager, 459 Peachtree St., Atlanta, Ga.

YOUNG TECHNICAL GRADUATE with four years' engineering and selling experience wants permanent position with good opportunity for experience and advancement. Good reference. Eastern interview. No. 1505, care Manufacturers Record, Balto., Md.

RATES AND CONDITIONS

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 25 lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 18c per line, 300 lines 16c per line; 500 lines or more, 15c per line.

WANTED—Position general manager of foundry; can make the product and sell it; up to date in every respect, costs, sales, labor; have made a specialty of commercial castings, using molding machines; twenty years' experience in the foundry business and know the market for the goods as well as the operation of the plant. Address No. 1507, care Manufacturers Record, Balto., Md.

EDUCATIONAL

RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical, Electrical and Chemical Engineering and General Science, leading to the degree of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Ch.E.), and Bachelor of Science (B.S.). Also special courses. Splendidly equipped new engineering laboratories. Send for catalogue to Registrar.

MARYLAND HOME

FOR SALE—Beautiful home in Dickerson, Md.; new 8-room house; all modern conveniences; close to school and churches; 200 yds. from R. R. station; excellent bass fishing in Potomac and Monocacy nearby; price right to quick purchaser. D. H. Mullinix, Dickerson, Md.

TRUST COMPANY WANTED

WANTED—TRUST COMPANY.—Southern city, 20,000 people, 400,000 people radius 60 miles, wants trust company; splendid opportunity; assistance locally. Address No. 1499, care Manufacturers Record, Balto., Md.

BUSINESS OPPORTUNITIES

TWO valuable patented car equipments need financing, or manufacturing and marketing facilities. Full particulars freely given. Write Henry Fresh, Box 83, Cumberland, Md.

WANTED—NORTH CAROLINA TIMBER LAND.—To exchange for clear and unincumbered Washington City property, 9 three and four family flats, for timber. I am constantly in need of large Southern tracts for sale and exchange, for good residence income and business properties, in Washington and other cities. Arthur M. Connor, Farms, Timber and Coal Lands, 224 Oxford Building, 14th and N. Y. Ave. N. W., Washington, D. C.

WANTED—To connect with individuals who will be willing to invest \$15,000 in a very successful graphite company in the best section in the South. The company is most successful in selling its product, and with additional capital can enjoy increased sales at a large profit. The best references can be given. Address P. O. Box 732, Atlanta, Ga.

FOR SALE OR RENT on easy terms, a new, up-to-date table factory on Belt Line, near Norfolk, connecting with seven roads, also steamboat lines. Address 166 Mt. Vernon Ave., Port Norfolk, Va.

\$100,000 WORTH of property in Somerset Co., Md., consisting of stores, farms, town and country residences, factory sites, etc., for sale, or will exchange for city property. Geo. A. Cox, Upper Fairmount, Md.

WANTED—An up-to-date office man or business manager for a wholesale and retail hardware and builder's supply business of long standing with well-established trade. An investment of \$10,000 to \$15,000 will give investor an opportunity of a lifetime. Owner of control willing to retire from active management. Address Box 173, Richmond, Va.

WANTED—Money to lend on first mortgage real estate, not over 50 per cent. Its value, in this city and county at 6 per cent. net, payable semi-annually; we guarantee principal and interest when due whether collected or not. For further particulars address Greenville Real Estate Loan & Insurance Co., W. B. Anthony, Secy., Greenville, S. C. Reference: Any bank or trust company in this city.

FOR SALE—The leading furniture business in the city of Valdosta. Good reason for selling. Everything up to date in this line. Can make terms to the right party. J. G. Mackey Real Estate Co., Valdosta, Ga.

\$16,000 BUYS 50 acres 1 mile from city limits of Jacksonville, Florida, near Seaboard Railway's big shops; high and dry and nicely located for investment or moderate priced subdivision. Terms: \$9000 cash; balance 1 and 2 years with 6 per cent. interest. Making division of partnership reasons for selling. Address Owner, Box 952, Jacksonville, Florida.

CLAY TRACT of 41 acres on Tidewater & Western R. R. at crossing of county road about one mile from Bermuda on James River, known as Epps' Crossing. Tract has been tested over its entire surface, showing clay exists to the depth of 4½ feet and covers entire property with overburden of 3 to 9 inches. The State Geologist reports as being the best found on the coastal plain, suitable for pipe, tile, pavers, fireproofing, and stiff-mud and dry-press face brick. Burns a dark cherry red, drying easily and safely.

This valuable clay bed, with a manufacturing site at Chester, for sale reasonable. The manufacturing site, consisting of between 3 and 4 acres, is on A. C. L. R. R. at junction of Tidewater & Western R. R., affording splendid shipping facilities to North or South by A. C. L. N. & W., S. A. L. T. & W., or by water. With proper development should prove a good money-maker. Full particulars upon request. Address Central Realty Co., Richmond, Va.

AMERICAN FIRM, with foreign offices, desires to introduce meritorious patents, inventions, processes in Europe. Send particulars. K. Box 36, Station F, New York.

TROUSERS SUPPORTER PATENT FOR SALE—Fills a long-felt want. A trousers supporter, consisting of a belt with patented fasteners, resting on the hips, yet perfectly supporting the trousers at the desired height. Invaluable, practical, comfortable, adjustable to any trousers. Broad patent for sale or on royalty. Address A. L. Abercrombie, 25 North Palmetto St., Daytona, Fla.

WE TURN real estate, residence lots or farms into cash. We are equipped in every way to promote land sales in all parts of the United States. Everything sold exclusively at auction and on commission. Write us. Our representative will inspect your property. National Real Estate & Auction Co., 1024 Woodward Bldg., Washington, D. C.

WANTED—Contractor to log and saw into lumber 40,000,000 feet of hemlock, white pine, poplar, oak, chestnut, etc.; band mill required; will let sawing contract alone if desired. Address S. F. Chapman, Asheville, N. C.

DESIRABLE SOUTHERN TERRITORY still open for the sale of our patent resilient spring wheel. Only correct design both scientifically and practically for motor vehicles. The money-making possibilities of this wheel under our sales distribution plan afford fine business opportunities to hustlers with a little money. Seaton Wheel Company, Nashville, Tenn.

WANTED—To correspond with parties relative to furnishing and installing a water system in town of 2500 people. Address No. 1508, care Manufacturers Record, Balto., Md.

FOR SALE—Account owner's death, complete boiler shop, with modern equipment for all ranges of work; plant unincumbered; located on 3 trunk lines with 2 city blocks of real estate; has 30 years of successful business record. Splendid opportunity. Address W. P. McCrossin, Executor, Birmingham, Ala.

WANTED—Correspondence with a practical brick and tile manufacturer who would be interested in buying an interest and taking the management of one of the best-equipped shale brick plants in the Southwest, using gas for fuel; distribution for the product covers a large territory; now making four distinct classes of vitrified face brick, also builders' and pavers', and will add tile, hollow brick and silo machinery; product will enter into four States; trade established; capacity now 75,000 brick per day; one of the most up-to-date plants in the Southwest; shale pit adjoining the plant that will last fifty years. A splendid opportunity for the right person. Plant located at Ft. Smith, Ark. Only plant here. Address M. C. Burke, Ft. Smith, Ark.

I WANT to hear from the board of trade of some town in Southern Virginia or North Carolina in the vicinity of which there is abundance of small pine; a town in which the business men will invest \$50,000 in a plant to manufacture this small pine into a product which will give back the investors a clean profit of \$50,000 every year. The product will be sold in Virginia and North Carolina. I have details ready to submit. Address No. 1502, care Manufacturers Record, Balto., Md.

AN INTEREST, together with active management at good salary, is offered for sale in a new light and ice plant in good small town in the best section of South Texas. Proposition will bear strictest investigation. Party must be a thorough steam and refrigerating engineer and highly recommended. Must have at least \$5000. Address No. 1472, care Manufacturers Record, Balto., Md.

MODELS

MODELS MADE FOR INVENTORS—General machine work. Designing and perfecting. Developing automatic devices and machinery. In a position to do all kinds of light tool and machine work. Prices reasonable. Estimates cheerfully given. Ideal Machine Works, 64 Ann Street, New York City.

INDUSTRIES WANTED

COTTON MILL

COMMITTEE ON NEW ENTERPRISES, Terrell Commercial Club, invites correspondence relative to establishing cotton mill. Citizens stand ready to assist substantially any person or persons who will show their faith in the enterprise by investing capital therein. Address E. D. Kelly, Chairman, Terrell, Texas.

MISCELLANEOUS

HENRIETTA, TEX., offers unlimited supply natural gas, to manufacturers; fire brick, tile shales; water; low taxes; healthful; 3 railroads; unusual opportunity legitimate enterprises. Address Booster Club.

BLUEFIELD, WEST VIRGINIA, the gateway to the vast Pocahontas coal fields, and the distributing point for half a million contented laborers, needs an overall factory, needs a mine implement factory, and needs a brick plant. Address C. T. Boykin, Secretary Bluefield Chamber of Commerce.

A SMALL RAILROAD will do more to meet your requirements than a large one. The Randolph & Cumberland R. R. is in the undeveloped section of North Carolina's best region, and on this line are splendid opportunities and an open field for a woodworking plant, cannery, brick plant, cotton or hosiery mill, besides other industries. We also have splendid low-priced farm lands in our territory. Write to J. R. McConnell, Industrial Agent, R. & C. R. R., Carthage, N. C.

INDUSTRIAL PLANTS FOR SALE

SCREEN DOOR AND ELECTRIC LIGHT PLANTS

ASSIGNEE MUST SELL—Screen-door factory, capacity 500 doors per day; electric light plant with 20-year franchise, in growing city. Address L. L. Thompson, Lilbourne, Mo.

BRICK AND TILE WORKS

FOR SALE—Brick and tile works; daily capacity 100,000 bricks, 20,000; water transportation to principal Eastern cities; excellent opportunity for anyone who understands the manufacture of tile and brick. For further particulars address J. E. Warren, Newport News, Virginia.

ICE AND ELECTRIC LIGHT PLANT

FOR SALE—Ice and electric-light plant in connection, in Kentucky town, 2000 inhabitants. We have franchise for water-works, and all can be operated together at low cost. Full particulars given to those who mean business and have money. Address Smith Cooperage Co., Louisville, Ky.

GINNING PLANT INCLUDING MACHINERY

BANKRUPT SALE—There will be sold at Rossville, Ga., May 5, 1914, the plant of the Southern Combing Gin Co., consisting of a reinforced concrete building 60x180, two stories, complete outfit for manufacturing gins, complete ginnership equipped plant, ready for operation. Also 28 town lots adjoining plant in Rossville, Ga., four miles from Chattanooga, Tenn. Fine opportunity for investment. All property in excellent condition. Address communications to T. F. McFarland, Trustee, Rossville, Ga.

NAVAL STORES AND PULP PLANT

NAVAL STORES AND PULP PLANT very cheap. For further particulars address W. E. Senour, M.D., 410 Fairfield Ave., Bellevue, Ky.

OIL MILL AND ELECTRIC LIGHT PLANT

LOCATED at crossing of railroad (roads running east, west, north and south), in the heart of the Yazoo-Mississippi Delta. Growing town of 2500 people. Light plant now showing net profit of 20 per cent. and growing. Oil mill, four-press outfit, but only three presses installed. Callahan make. Bargain if sold quick. Address Box 551, Greenwood, Miss.

Classified Opportunities

COTTONSEED OIL MILL

FOR SALE—Modern, well-equipped, up-to-date, ideally located 3-press (Callahan) cottonseed oil mill; operation 2 years; full description on request. A bargain for quick buyer. Original cost, about \$75,000. Salisbury Realty & Insurance Co., Salisbury, N. C.

MINERAL AND TIMBER LANDS, WATER POWERS AND MISCELLANEOUS PROPERTIES

FOR SALE—210 acres of stone and timber land, 10 houses, 1 mile of railroad track, unlimited supply of high-grade limestone. A fine plant, consisting of 3 patent iron kilns. Will sell at a sacrifice. Polk Real Estate Co., 102 Louisiana St., Little Rock, Ark.

FOR SALE—Orange groves, farms, cut-over lands, timber lands of all kinds, and brokerage. Address George A. Mawman, 100 Second St., Palatka, Florida.

BAUNITE, fuller's earth and kaolin deposits for sale outright or on royalty basis. We are in position to furnish you with farm lands or mineral clay lands anywhere in South Georgia. Southern Insurance & Realty Company, E. W. Gould, R. C. Houser, Georgia Life Bldg., Macon, Ga.

150,000,000 PINE, 101,000,000 cypress, 1,500,000 gum, 300,000 telegraph poles and cypress ties, 1,000 acres good land in fee, \$1,000,000; or will be sold each separately. 700 acres fine citrus land 4 miles Arcadia, DeSoto Co., for sale or exchange for mercantile business anywhere. 20,000 acres good land in North Fla. for \$3.50 per acre; 1/2 must be cash to get it for this amount. Jas. R. Vaughan, Bisbee Bldg., Jacksonville, Fla.

CITY PROPERTY

FOR SALE—40 acres, all ready for an auction, divided into 171 lots, only 4 blocks from the Government building; a splendid opportunity for someone to double his money. J. G. Mackey Real Estate Co., Valdosta, Ga.

BRICK CLAY PROPERTY

BRICK CLAY.—Attention, Brick Men! Have located within five miles of Atlanta large supply fine brick clay; excellent railroad facilities. This property is splendid location for Southern market. Can be bought reasonably, considering actual value. Estate of James E. Lynch, P. O. Box 519, Atlanta, Ga.

PHOSPHATE ROCK DEPOSITS

FOR SALE—500 acres of blue rock phosphate land near Mt. Pleasant, Tenn., containing 2,000,000 tons running from 58 to 72% bone phosphate of lime. Spur of L. & N. R. R. runs through it. Capt. W. N. Hughes, P. O. Box 523 1/2 Broadway, Nashville, Tenn.

OIL LAND

2 ACRES oil land, Caddo Parish, La., located in shallow stratum section; six to eight hundred to oil sand; title clear; \$300 acre, cash. L. L. Burkhead, Columbus, N. M.

COAL LAND FOR SALE

FOR SALE—800 acres coal land in Jackson county, Ala., hill showing good grade coal on sides in Bon Air and Orm Belt. Write E. H. Marshall, Union City, Tenn., for particulars.

TIMBER LAND FOR SALE

TWO HUNDRED THOUSAND (200,000) acres timber land in Florida, containing over 5,000,000 feet of original growth pine; has been cruised by expert; placed on the market for the first time at a very low figure. South Carolina timber: 15,000 acres on the Atlantic Coast Line and Southern Railroad. Estimated 65,000,000 feet short-leaf pine. For price and full particulars apply to Johnson's American and Foreign Real Estate Exchange, 945 Pennsylvania Avenue, Washington, D. C.

A FEW GOOD TRACTS in Southern States at prices attractive for investment or operation. Hemlock, spruce, oak, poplar, gum, cypress. Real Estate Investment Co., 816 Connecticut Ave., Washington, D. C.

TIMBER AND TIMBER LANDS IN ALABAMA.—Tracts of virgin pine and hardwood, 5000 to 20,000 acres each; fee simple; all finely located; 9000-acre tract pierced by main trunk-line railroad and admirably situated for colonization; cut good; prices right. Correspondence solicited from parties meaning business; otherwise don't write. T. M. Bradley, 1029 First National Bank Bldg., Birmingham, Ala.

TIMBER TRACTS located for manufacturers or investors by practical timbermen. Correspondence solicited. Jo A. Parker, Parma, Mo.

MANUFACTURER desiring medium size tract of yellow pine timber at favorable price can learn of something to his advantage by addressing Box 27, Ellisville, Miss.

5000 ACRES of virgin hardwood timbered land in East Tennessee, \$10 per acre; would exchange. Farm Realty Co., 828 Jefferson Co. Bank Bldg., Birmingham, Ala.

FOR SALE—50,000 acres virgin hardwoods in Florida; excellent store proposition; ideally located for export; guarantee 8000 to 10,000 feet per acre. Price, \$10 per acre, fee simple. Ralph J. Mincham, Brunswick, Ga.

17,384 ACRES, South Ala., long-leaf yellow pine; 50,000,000 feet; water and rail transportation; excellent for all kinds farming after timber is removed; ideally located for game preserve. Only \$10 per acre. H. M. Faulk, Box 4, Mobile, Ala.

SAW MILL AND TIMBER

FOR SALE—One new band mill, complete, suited for cutting hardwood, and 30,000,000 feet of hardwood, mostly cypress, oak and poplar; about the same amount of timber can be obtained from other parties near mill. Will sell cheap. Terms easy. Arlington Lumber Co., Arlington, Ga.

FARM AND TIMBER LANDS

ARCHIE M. SMITH, No. 1212 Hibernia Bank Building, New Orleans, La. Timber and agricultural lands in all parts of State for sale. Special attention given to property of non-residents.

A BARTOW MAN will sell on easy terms at half value, 265 acres fine farm and citrus land, well timbered, 3 1/2 miles west of Chiefton Station; good neighborhood. Will also exchange for improved South Florida town property. Address P. O. Box 172, Bartow, Fla.

FARM AND TIMBER LAND on the easy-payment plan; some small improved tracts; good for cotton, corn, alfalfa and grain. Prices from \$4 to \$25 per acre. W. Knight, Real Estate Dealer, Bigelow, Arkansas.

HAVE select list of large and small farm properties, also timber, coal and colonization tracts, and a large list of income properties for sale and exchange. Let me know your wants. Arthur M. Connor, 224 Oxford Bldg., Washington, D. C.

FOR SALE—All kinds of farms, timber, mineral lands, river plantations, colonization tracts, orchards and grazing land. International Farm Agency, Va. Bldg., Lynchburg, Va.

PLANTATIONS FOR SALE

IN SUNNY CENTRAL MISSISSIPPI, six magnificent well-improved plantations in black belt, ranging from 300 to 3000 acres; not in delta, but best land in State; close to good railroad town; fine, healthy community. Prices very cheap. Can be cut in small farms and quickly sold for great profits. Local capital insufficient for such propositions. If interested, write S. P. Stubblefield, Yazoo City, Mississippi.

RANCHES FOR SALE

WAR-TIME PRICE on 40,000-acre cattle ranch. Money in operation, and it will enhance in value. T. M. Richardson, Jr., El Paso, Tex.

100% PROFIT.—If you will buy this 2500-acre ranch in Jackson Co., Texas, and subdivide it, we will contract to dispose of it at 100% profit to you. \$20,000 first payment; 7 years on balance at 6%; liberal release clause for colonizing. Horwood & Co., Cleburne, Tex.

COLONIAL ESTATES AND STOCK FARMS

COLONIAL ESTATES AND STOCK FARMS in Virginia. Green & Redd, Richmond, Va.

FRUIT, FARM AND TRUCK LANDS

ALABAMA

WHY BUY FARMS IN CANADA when far better and lower-priced land is obtainable in the sunny South? 2200 acres in black belt, Dallas county, Alabama; close proximity to thriving town; intersected by new macadamized State highway, also by railroad; pronounced by Agricultural Department adapted for alfalfa raising; also for pecans, cotton, corn and stock; at \$28 per acre, entire tract, or smaller parts at \$35 per acre. For particulars write Praiseland Alfalfa Co., 808-12 Barrister Bldg., Washington, D. C.

1430 ACRES, South Ala., only 51 miles from Mobile, Ala., on L. & N. R. R.; best peach and strawberry district in Ala. Only \$20 per acre for an immediate sale. Adjoining lands selling for \$50 to \$100 per acre, unimproved. H. M. Faulk, Box 4, Mobile, Ala.

ARKANSAS

FAMOUS SPRINGDALE FRUIT DISTRICT.—Best part of Ozarks; fine class of people; no malaria, mosquitoes, negroes, saloons; pure soft water. Summer homes, bearing orchard, cheap stock lands. Free lists. Fredricks, Springdale, Arkansas.

FLORIDA

5000 ACRES of Florida lands in the famous Indian River orange, grapefruit and trucking belt, for sale or exchange for clear income property. Price \$40 per acre. A. L. Hill, owner, 221 W. Forsyth St., Jacksonville, Fla.

THE PALATKA FARMS COMPANY of Palatka, Florida, offers to homeseekers the very superior advantages of splendid soil, adapted to potatoes, corn and trucking, or that for oranges and grapefruit, or for combination of both, with location unsurpassed, lying along the beautiful St. Johns River, 2 miles of Palatka, an up-to-date city of 8000 population. It boasts of electric-light and gas plants, four railroads and cheap river transportation. Write for literature. P. J. Becks, Palatka, Fla.

IF YOU WOULD LIKE TO HAVE A NICE HOME or make a profitable investment in this fair land, write me for full and free information as to soil, climate, resources, industries and opportunities in any part of the State. J. H. Brinson, Ocala, Fla.

THREE MONTHS FREE.—Subscription to the Indian River Farmer. For truckers, fruit growers, general farmers, and folks who want to know about Florida. Address Indian River Farmer, Dept. "V-1," Vero, Fla.

FOR SALE—Vegetable farm, 10 acres, 5 cleared and irrigated, ready for fall crops; nice bungalow, big barn, chicken-houses, tool-house, horses, wagons, tools, 2 flowing wells; healthy location, good drainage, high and dry; proven section; big bargain; good reason for selling. Box 867, Sanford, Fla.

GEORGIA

520 ACRES fine farming land as you will find in Georgia, \$25 per acre; will raise anything that grows in Central Ga.; close to railway and county seat. Southern Ins. & Realty Co., Ga. Life Bldg., Macon, Ga.

FOR SALE—A 40-acre pecan grove, trees bearing now, adjoining the city limits of Valdosta, one of the best cities in Georgia; this grove easily worth \$700, but for a quick sale will let it go for \$375 per acre. J. G. Mackey Real Estate Co., Valdosta, Ga.

LOUISIANA

ANY GOOD FARMER with a little money who would be interested in a most splendid and fertile farm in North Louisiana, good for stock, corn, hay and cotton, will do well to write the owner, Wm. B. Rely, care of The Rely-Taylor Co., New Orleans, La.

MARYLAND

ONE OF THE FINEST FARMS in Harford county, Maryland, three miles from Baltimore, the social center of the county, situated on the Susquehanna River; fishing club near; excellent rock fishing; on the new State road between Maryland and Pennsylvania, 20 miles from Baltimore, located right in the heart of the blue grass regions of Harford county; many Virginia families maintain estates here; excellent for stock raising. This farm contains 200 acres, with a mansion of 16 rooms and bath, modern in every sense; house alone cost \$25,000; all new fencing of post and rail and panel over entire farm. Views from any portion of the estate looking into three counties; always recognized as the finest farm in this section of Maryland. This property can be bought for \$30,000, and satisfactory terms can be made to purchaser. The Webb & White Co., 717-729 Title Bldg., Baltimore, Md. St. Paul 5966-5967.

FOR SALE—Productive Carroll county, Md., farm: 350 acres; near railroad station; stone dwelling; necessary outbuildings, all in good order; well watered; fruit; complete equipment if desired. J. Harry Joy, Professional Bldg., Baltimore, Md.; D. Sterrett Gittings 401 Maryland Trust Bldg., Baltimore, Md.

MISSISSIPPI

GRAPEFRUIT, SATSUMA ORANGES AND PECANS have been profitably grown for 14 years on the Mississippi Gulf Coast; orchards 5 years old are paying \$500 per acre and over annually. I plant and develop for you under contract, pay you 6% annually on your investment for 5 years, turning over an orchard that under normal conditions will pay you over \$500 annually and be worth easily three times what it cost you; have over 600 acres in orchard. C. H. Woodward, Ocean Springs, Miss.

FARM LANDS in large and small tracts, stock plantations and colonization bodies. Southland Realty Co., Corinth, Miss.

1080 ACRES Gulf coast lands in South Miss.; heart of Satsuma and pecan industry; centrally located between 3 trunk lines; 35 acres in cultivation; houses, barns and tenant-houses. Only \$16 per acre. H. M. Faulk, Box 4, Mobile, Ala.

FOR SALE—1450 acres rich bottom and table land in the rich strawberry belt, at Madison Station, on I. C. Railroad, 12 miles north of Jackson, capital of Mississippi; improvements, 5-room residence and large barn, 23 tenant-houses, plenty living water for stock and switch cane for winter pasture; land runs up to corporate limits; 1 mile of railroad frontage; blueprint furnished real buyers. Price \$25 per acre; terms. Write W. H. Kennon, Jackson, Miss.

TEXAS

OPPORTUNITY.—A fortune for little money; 100 acres close to oil well and good town; good land; bargain. F. Kiber, Angleton, Tex.

WEST VIRGINIA

FOR SALE—One and five acre farms near junction of two railroads. H. L. Alexander, Martinsburg, W. Va.

FINANCIAL

FLORIDA.—Will sell \$5000 par value stock of Sarasota Improvement Co. at 90. Refer in Baltimore to R. C. Caples, a director in the company. Executives declare worth 125. Address Box 477, Sarasota, Florida.

WE ARE SELLING the capital stock of the United Development Company, a company that proposes to buy, develop and colonize lands all over the South. The natural increase in values will pay good dividends. Your money is safe in lands. Stockholders can buy lands from the company at minimum prices. Let us send particulars. Bolton Agency Co., 322 1/2 19th St., Birmingham, Ala.

AUTOMOBILES

AUTOMOBILE BARGAINS.—To close out an agency will sell at sacrifice prices two "Little Giant" 1500-pound commercial cars used as demonstrators. Also have for sale at unequaled values one 4-cylinder 5-passenger touring car, one 4-cylinder 7-passenger limousine and one 6-cylinder 7-passenger limousine, all made by the Stevens-Duryea Company and in perfect order. Address "Automobile," 211 Union St., Nashville, Tenn.

WAGONS FOR SALE

WAGONS FOR SALE.—Ten Troy dump-bottom reversible traction wagons, 3 1/2-yard, with 10-inch tires; have been used four months. Geo. G. Henderson, care Manufacturers Record, Balto., Md.

DREDGE FOR SALE

1 1/2-YD. DREDGE FOR SALE.—Dredge now at work on drainage canal; can make delivery in 30 to 60 days. Dredge almost new. Will sell cheap. Box 23, Greensboro, N. C.

MACHINERY AND SUPPLIES

FOR SALE.—Sohn & Co. triple hoist with direct-connected 10 H. P. Crocker-Wheeler 500-volt motor, \$400. Jno. T. Landis, Nashville, Tenn.

PATENTS FOR SALE

STOP! STAY OUT AND WONDER.—Latest improved double combination door lock, operated with two keys in connection with the knob and spindle; absolutely burglar proof. This lock is of ordinary size and form. For further information apply to James T. Brockin, Huffman, Ark.

PATENT ATTORNEYS

EUGENE C. BROWN, ENGINEER AND PATENT LAWYER, Suite 40 Victor Building, Washington, D. C. Member Bar U. S. Supreme Court. Patents and Trademarks. Inventions are considered both from Engineering and Legal standpoints in my prosecution of patents. An experience of over 25 years as Examiner in U. S. Patent Office and over 6 years as Patent Expert in important patent suits are my special qualifications. Reports upon validity and infringement. Send sketch of invention for advice.

PATENTS.—Herbert Jenner, patent atty. and mechanical expert, 608 F St., Washington, D. C. I report free of charge if a patent can be had and its exact cost. Send for circular.

PATENTS THAT PROTECT.—Careful, honest work in every case. Patent your ideas; they may bring you wealth. 64-page book free. FitzGerald & Co., 817 F street, Washington, D. C. Established 1878. Send for our book.

PATENT YOUR INVENTION.—Send sketch for free expert search and report as to patentability. Books on inventions and patents, and book of references from congressmen, manufacturers, bankers and inventors, sent free. John S. Duffie & Co., Patent Attys., 620 F St. N. W., Washington, D. C.

PATENTS THAT PROTECT AND PAY. Advice and books free. Highest references. Best results. Promptness assured. Send sketch or model for free search of Patent Office records. Trade-marks registered. Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

PATENT YOUR IDEAS.—\$3000 offered for certain inventions; book, "How to Obtain a Patent" and "What to Invent," sent free upon request; send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandler & Chandler, patent attorneys, 978 F street, Washington, D. C.

PATENTS secured or Fee returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,000,000 offered for one invention; \$16,000 for others. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., Washington, D. C.

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

GOVERNMENT PROPOSALS

PROPOSALS FOR FURNISHING, OR Furnishing and Erecting, Movable Metal Louvers and Operating Mechanisms for Permanent Shop Buildings. Sealed proposals will be received at the office of the General Purchasing Officer, Panama Canal, Washington, D. C., until 10:30 A. M. May 9, 1914, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 844) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

PROPOSALS FOR CAST-IRON WATER Pipe and Fittings, Valves, Nails, Water Coolers, Drinking Glasses, Leather, Cotton Sheet, Railway Flags, Rules, Record Books, Binder's Board, Pad Board, Chipped Soap, Silica Sand, Calcium Carbide, Chloride of Lime, Turpentine, Linseed Oil, Lard Oil, Gasoline, Varnish, Shellac, and Chrome Yellow. Sealed proposals will be received at the office of the General Purchasing Officer, Panama Canal, Washington, D. C., until 10:30 A. M. April 30, 1914, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 842) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

PROPOSALS FOR RANGE BOILERS, Water-Closets, Bathtubs, Lavatories, Sinks, Drain Boards, Shower Heads, Shower Stops, Brass Pipe, Brass Ells, and Lumber. Sealed proposals will be received at the office of the General Purchasing Officer, Panama Canal, Washington, D. C., until 11:30 A. M. April 24, 1914, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 843) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City, and 614 Whitney-Central Building, New Orleans, La.; also from the U. S. Engineer Offices in the following cities: Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo., and Chamber of Commerce, Quincy, Ill. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., March 31, 1914. Sealed proposals will be opened in this office at 3 P. M. May 14, 1914, for the construction, complete (including mechanical equipment, interior lighting fixtures, and approaches), of a one-story-and-basement building; ground area, 4800 square feet; fireproof construction; stone facing; composition roof. Drawings and specifications may be obtained from the custodian of site at Moundsville, W. Va., or at this office, in the discretion of the Supervising Architect. O. WENDEROTH, Supervising Architect.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., April 15, 1914. Sealed proposals will be opened in this office at 3 P. M. May 27, 1914, for the construction (including mechanical equipment, interior lighting fixtures, and approaches), of a one-story-and-basement building; ground area, 4800 square feet; fireproof construction; stone facing; composition roof. Drawings and specifications may be obtained from the custodian of site at Pulaski, Tenn., or at this office. O. WENDEROTH, Supervising Architect.

U. S. ENGINEER OFFICE, Room 309 Custom-house, Baltimore, Md., April 2, 1914. Sealed proposals for dredging in certain rivers and harbors on east shore of Chesapeake Bay will be received at this office until one o'clock P. M. May 4, 1914, and then publicly opened. Information on application. LANSING H. BEACH, Col. Engrs.

PROPOSAL ADVERTISING INFORMATION

RATE: 20 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE 9 A. M. Wednesday. Copy received later cannot be published until issue of following week.

NIGHT LETTER: When too late to send copy by mail to reach us by 9 A. M. Wednesday, forward by night letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—20 cents per line per insertion.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., April 6, 1914. Sealed proposals will be opened in this office at 3 P. M. May 18, 1914, for the construction, complete (including mechanical equipment, lighting fixtures, and approaches), of the United States postoffice at La Fayette, La. One-story-and-basement building; ground area, 3550 square feet; non-fireproof construction; stone and stucco facing; tin roof. Drawings and specifications may be obtained from the custodian of the site at La Fayette, La., or at this office. O. WENDEROTH, Supervising Architect.

U. S. ENGINEER OFFICE, Galveston, Texas, March 25, 1914. Sealed proposals for construction of pontoon pipe lines for dredges Sam Houston and San Jacinto will be received at this office until 11 o'clock A. M. April 24, 1914, and then publicly opened. Information on application. C. S. RICHIE, Lieut.-Col. Engrs.

U. S. ENGINEER OFFICE, Wilmington, N. C., Apr. 9, 1914. Sealed proposals for furnishing and delivering about 11,000 tons riprap stone at Wilmington, N. C., will be received at this office until 12 M. May 8, 1914. Information on application. H. W. STICKLE, Maj. Engrs.

BOND OFFERINGS

Bonds For Sale

The Town of Norton, Va., has five thousand dollars thirty-year 5 per cent. Street Improvement Bonds for sale. Address T. M. PEPPE, Mayor.

or G. A. SMITH, Chairman Finance Committee.

\$125,000 5% Bonds

\$125,000 City of Daytona, Florida, 5 per cent. Sewerage Bonds. Notice is hereby given that sealed bids will be received by the Board of Public Works of Daytona, Florida, until two (2) o'clock P. M. May 5, 1914, at its office in Daytona, for the purchase of \$125,000 of gold five per cent. (5%) Sewerage and Drainage Bonds of the City of Daytona, Florida. Said bonds are dated July 1, 1914, and become due July 1, 1954. Seventy-five of said bonds are of the denomination of \$1000 each, and one hundred of the denomination of \$500 each. Said bonds and the interest coupons are payable at the office of the Treasurer of the City of Daytona, or at the Office of the United States Mortgage & Trust Co., New York City.

All bids must be unconditional and must be accompanied by a certified check for two (2) per cent. of the amount of the issue. No bid for less than par will be considered. The right is reserved to reject any and all bids.

BOARD OF PUBLIC WORKS, DAYTONA, FLORIDA.
J. MILLIGAN,
D. D. ROGERS,
Committee.

\$60,000 City of Fayetteville (Tenn.), 5% Semi-Annual Coupon Sewer Bonds

Sealed bids are invited for the purchase of Sixty Thousand (\$60,000.00) Dollars coupon Sewer Bonds of the City of Fayetteville, Tenn., to be opened on May 12, 1914, at 2 o'clock P. M. The bonds were authorized at the election held on April 4, 1914, and are issued as authorized and provided by and under Chapter 199 of the Acts of the General Assembly of the State of Tennessee of 1907, as amended by Chapter 319 of the Acts of the General Assembly of the State of Tennessee of 1913. The bonds are of Five Hundred Dollars (\$500.00) denomination, bear date of May 1, 1914, and mature May 1, 1934; optional after ten years (10), with interest at the rate of five per cent. per annum (5 per cent.), payable semi-annually—May 1 and November 1. No bid can be received for less than par and accrued interest. A certified check of One Thousand Dollars (\$1000.00) is required to accompany bids. The City reserves the right to reject any and all bids. Address either J. M. Fulton, Mayor, or Hiram Higgins, Clerk, Fayetteville, Tenn., April 9, 1914.

Sale of Drainage Bonds

The Mecklenburg Drainage Commission invites bids on an issue of \$11,000 of drainage bonds, Mecklenburg Drainage District No. 6. These bonds are charged against 2546 acres of farm lands in the northern part of Mecklenburg county, near Huntersville, Davidson and Cornelius, North Carolina, lying along McDowell Creek, valued at fifty to one hundred dollars per acre.

These bonds will be issued in denominations to suit the purchaser. They will comprise an equal series, each series consisting of a like number of bonds, bearing interest at six per cent. The respective series of the bonds will be payable annually, the last series thereof maturing ten years from the date of issue; annual interest installments to be represented by coupons.

For the payment of these bonds, taxes will be levied upon the lands affected, collectible as other State taxes, and constituting a lien upon the property.

Bids will be received up to noon of May 4, 1914. The Commission reserves the right to reject any or all bids.

For further information address JAS. R. ALEXANDEL, Chairman.

CLARKSON & TALIAFERRO, Attorneys,
Charlotte, N. C.

\$600,000 Bell County, Texas

NOTICE TO BOND BUYERS.

The Commissioners' Court of Bell County, Texas, will receive sealed bids until 10 o'clock A. M. Tuesday, April 21, 1914, for \$600,000 Bonds of Road District No. 5, in Bell County, Texas, said bonds bearing interest at 5 per cent. per annum, payable semi-annually. Said bonds to run forty years with serial option to pay \$15,000 each year. Said bonds must bring par and accrued interest, and will be payable in cash on delivery. Said delivery to be made as agreed by the purchaser and Commissioners' Court.

A certified check of \$15,000 must accompany each bid, payable to W. S. Shipp, County Judge. The said check shall be forfeited to the Road District and assessed as liquidated damages should the contract be awarded to the bidder giving said check and he failing, after securing ten days' notice, to execute and provide an approved bond for the faithful performance of the contract. Said check shall be returned to the bidder when he pays cash for bonds or gives a bank guarantee that said bonds will be paid for in cash when delivered. The Commissioners' Court reserves the right to reject any and all bids. Bond record already approved by the Attorney-General of Texas.

W. E. HALL, Auditor.

Bonds For Sale

Pecos County, Texas.
Offers for sale \$35,000 of Public Road Improvement and Maintenance Bonds in denomination of \$1000, payable 40 years after February 2, 1914, bearing interest at the rate of 6 per cent. per annum from February 2, 1914, interest payable annually on the 10th day of April at the Chase National Bank of New York City, N. Y. Interest coupons attached to bonds. The County Judge and Commissioners of Pecos County, Texas, reserve the right to reject any and all bids that may be received. Each bid must be accompanied by a duly certified bank check in the sum of \$1000 to show good faith of bidder, the same to be returned in the event bid is not accepted. These bonds are redeemable at option of the county after 10 years from their date. Bids will be received up to and including the 25th day of April, 1914, addressed to Howell Johnson, County Judge, Pecos County, Fort Stockton, Texas. The following is the financial standing of Pecos county: Organized 1876; taxable values for year 1913, \$8,977,100; actual values if a full rendition was given, estimated to be \$12,000,000; total bonded indebtedness, exclusive of this issue, \$31,000; total with this issue, \$166,000; total county tax rate, including all funds, .93% on the \$100 valuation; there are 65 miles of railway running through the county, known as the K. C. M. & O. R. R. Co.; taxable values will increase in the current year about \$2,000,000, and there is every indication that there will be a continual increase in total taxable values in the future.

City of Wauchula (Florida), \$3000 Paving and Street Improvement Bonds, \$15,000 Sewerage System Bonds, \$22,000 Water-Works Bonds

Notice is hereby given by the Board of the Bond Trustees of the City of Wauchula, Florida, that, subject to the conditions hereinafter named, sewerage system, water-works and paving and street-improvement bonds of said city, dated January 1, 1914, in the total amounts and for the purposes above named, bearing interest at six per centum (6%) per annum, payable semi-annually, will be offered for sale to the highest and best bidder or bidders therefor (at a price, however, not less than ninety-five (95%) per centum of their par value plus the accrued interest to date of delivery of the bonds), at the Council Chambers of the City of Wauchula, State of Florida, on the 25th day of April, A. D. 1914, at the hour of 1 o'clock P. M. of that day.

The principal of all of said bonds is payable in thirty years their date without option of prior payment.

The Board of Bond Trustees agrees to furnish the purchaser or purchasers, free of charge, upon delivery of the executed bonds, a complete certified transcript of the proceedings leading up to the issuance of and relating to said bonds, with due proof of a compliance with the requirements of Chapter 6237 of the Session, Laws of 1911 of the State of Florida, relating to validating bonds, with the written professional opinion of F. Wm. Kraft, Bond Attorney, Chicago, Illinois, as to the legality of said bonds. All tenders, bids or offers to purchase any of said bonds shall be unconditional except as to the terms and conditions stated in this notice, and such bids shall be addressed to the undersigned Board of Bond Trustees, accompanied with a certified check upon one of the banks of the City of Wauchula, Florida, unconditionally payable to the order of the "Board of Bond Trustees" of the City of Wauchula for an amount not less than three per centum (3%) of the principal of said bonds, which bid shall be made to insure good faith on behalf of the bidder. The Board of Bond Trustees reserves the right to reject any or all bids or offers of purchase. No bids less than ninety-five per centum (95%) of the principal of the bonds plus the accrued interest on said bonds to the date of delivery of said bonds or for anything else than cash will be considered. Dated this 16th day of March A. D. 1914.

C. J. CARLTON,
T. G. WILKINSON,
GEO. S. WILLIAMS,
Board of Bond Trustees of Wauchula, Fla.

PAVING AND GOOD ROADS

Grading and Macadamizing

NOTICE TO CONTRACTORS.

Sealed bids will be received by the Road Commissioners of Sevier County, at the Courthouse in Sevierville, up to 12 o'clock M. May 1, 1914, for the grading of about 60 miles of road and the macadamizing of about 30 miles of road.

Profiles and specifications can be seen in the Engineer's office after April 25, 1914.

A certified check for \$500 must accompany each bid.

The right to reject any and all bids is reserved by the Commissioners.

H. C. BUTLER,
W. R. CATLETT, JR.,
J. C. WEBB,
Commissioners.

Notice to Contractors of Street Paving

Sealed proposals will be received until 10 A. M. April 25, 1914, by the undersigned, or the City Council for the City of Columbia, South Carolina, for about 60,000 square yards of street paving, together with the extension of concrete or granite curbs as may be found necessary.

Bids will be received for paving with Sheet Asphalt, Bituminous Concrete and Bituminous Macadam on both a four (4) inch and a five (5) inch concrete foundation, but the kind and amount of each paving to be used is to be decided by the City Council after the proposals are submitted.

Each tender must be accompanied by a certified check drawn to the order of the Treasurer of the City of Columbia, S. C., or New York draft to the amount of five hundred dollars (\$500), which will be subject to forfeiture in case of failure on the part of the contractor to enter into a written contract and furnish a bond with approved sureties in the sum of one-half of the amount of contract within ten (10) days after being called upon to do so.

Specifications and all available information will be furnished on application to this office. The right to reject any or all tenders and to let the work as a whole or in parts is reserved by the City Council.

JOHN MCNEAL,
City Engineer.
R. C. KEENAN,
Council Supt. of Streets,
Columbia, S. C., April 6, 1914.